昆 蟲 学 評 論

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# *Takasagoagonum scotus*, Gen. Nov. and Sp. Nov. (Platynini) from Formosa (Coleoptera, Carabidae)

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I describe one new genus and one new species based on the two specimens sent to me by Mr. SHINGO NAKAMURA to whom I wish to express my cordial gratitude for his offering specimens.

## Genus *Takasagoagonum* nov.

Type-species: *Takasagoagonum scotus* sp. nov. from Formosa.

*Description.* Pronotum and elytra punctate and pubescent, not metallic. Head (Fig. 2) not punctate, glabrous; neck-constriction faintly visible on dorsal side, indistinct on lateral sides, and therefore oblique part of tempora not well distinguishable from neck; tempora developed; eyes small, well prominent, ventral margin widely distant from buccal fissures; two pairs of supraorbital setae present, anterior setae more distant from eyes than usual, posterior setae fully distant from eyes, more distant from eyes than from neck-constriction; frontal lateral furrows unusually wide and deep; antennae rather slender, pubescent from segment 4, segments 1 to 3 without secondary setae, segment 2 without verticillate setae at apex; mandibles rather slender, porrect part of left mandible longer than labrum; palpi fully slender, glabrous; mentum with two small pits, tooth moderately long, simple; submentum bisetose on either side. Pronotum (Fig. 5) transverse; basal angles defined; lateral margins unbordered, rather narrowly or somewhat widely explanate-reflexed, bisetose on either side. Wings atrophied. Elytra with apex not truncate nor dentate; shoulder indistinct; basal pore present; scutellary striole moderately long or a little shortened; interval 3 without dorsal pore. Legs slender, hind tarsi distinctly longer than head width; hind femora with seven or eight short setae along hind margin; fore tibiae sulcate; tarsi narrow, mid and hind tarsi bisulcate; tarsal segment 4 moderately bilobed, lobes almost equal in fore tarsi (Fig. 3), outer lobe a little longer than inner lobe in mid and hind tarsi (Fig. 4), segment 4 of hind tarsi without apical nor subapical setae; tarsal segment 5 glabrous ventrally; claws simple. Ventral side not pubescent; prosternal process carinate and *x*-shaped behind, glabrous; mesepimera normal; sternites 3 to 5 with single seta on either side, sternite 6 bisetose on either side in ♀. Apical segment of styluses (Fig. 6) well dilated outward at base, with one short spine on dorsal side, with some short spines on ventral side, row of spines marginal.

*Range.* Asia (Formosa).

*Remarks.* The present new genus is easily distinguishable from *Rupa* and *Colpoides* by the following key.

## Key to pubescent genera of Platynini found in Formosa

1. Head not pubescent; ventral side not pubescent, sternites with only ordinary setae; antennal segments 1 to 3 not pubescent, segment 2 without additional setae: mentum tooth simple; elytral interval 3 without dorsal pores······························ *Takasagoagonum*, nov.

— Head pubescent or setose; ventral side densely pubescent or setose, or with some additional setae on sternites······························ 2

2. Pubescence or setae on body short, ventral side densely pubescent or setose; antennal segments 1 to 3 sparsely pubescent or setose, segment 2 with some short verticillate setae at apex; mentum tooth simple; mid and hind tarsi bisulcate······························ *Rupa* JEDLIČKA

— Setae on body long, ventral side not pubescent, sternites 3 to 5 with some secondary setae; antennal segments 1 and 2 with a few secondary setae, segment 3 glabrous, segment 2 with some long verticillate setae at apex; mentum tooth bifid; mid and hind tarsi not sulcate on inner area······················*Colpoides* JEDLIČKA(1)

### *Takasagoagonum scotus* sp. nov.

*Description.* Length 11.8–12.5 mm. Width 4.8–5.1 mm.

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(1) These characteristics are based on only *Colpoides formosanus* JEDLIČKA.

Black, head shiny, pronotum a little less shiny, elytra somewhat mat; labrum and mandibles reddish black, palpi and antennae reddish brown, lateral margins of pronotum somewhat reddish, lateral to apical margin of elytra not or faintly reddish, femora reddish black, tibiae and tarsi reddish brown, tibiae faintly dark; ventral side black.

Head (Fig. 2) rather wide, well convex, transversely, somewhat depressed at level of front margin of eyes; microsculpture distinct, isodiametric on disc, forming transverse meshes around posterior supraorbital setae; tempora constricted behind eyes, oblique part not or slightly tumid, fully longer than eye; interspace of posterior supraorbital setae a little narrower than interspace of anterior supraorbital setae; WH/WF 1.34, 1.41 in two ♀♀; frontal impressions deep, reaching anterior supraorbital setae; antennae reaching basal one-sixth or -fifth of elytra, segment 1 two and three-fourths to two and nine-tenths times as long as wide, a little shorter (at most one-tenth shorter) than segment 3, segment 4 a little longer than segment 3, one and one-sixth to -fifth times as long as segment 5; apical segment of maxillary palpi almost cylindrical, one and one-eighth to -sixth times as long as penultimate segment; mentum tooth almost

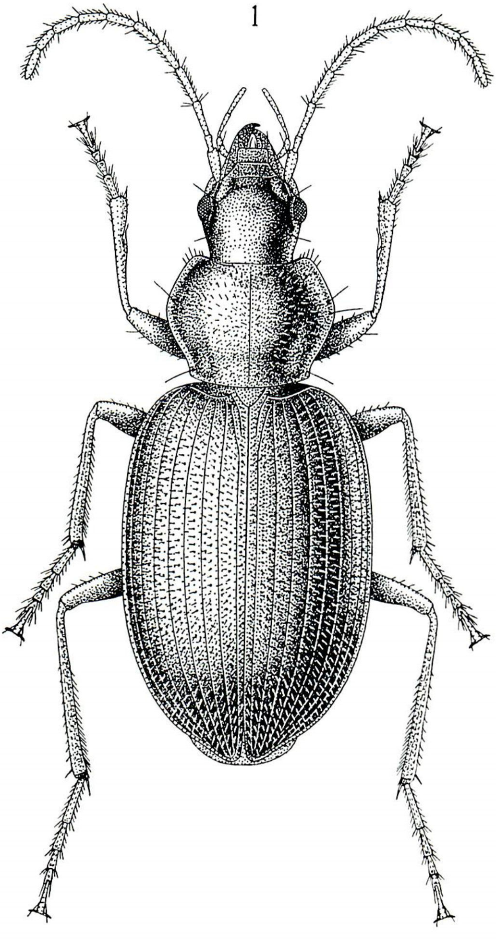
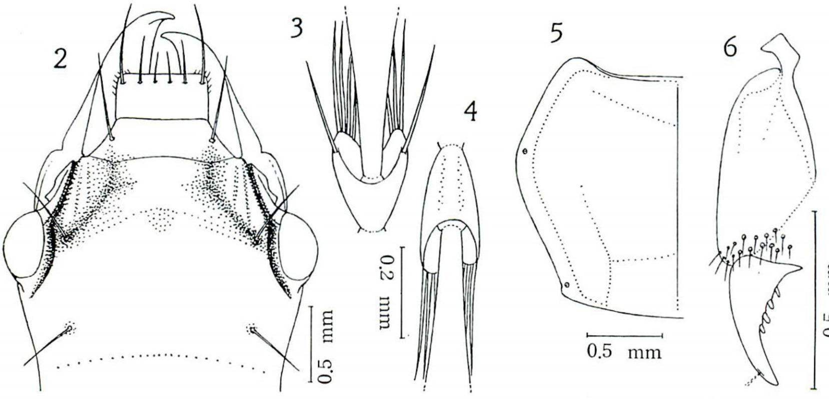


Fig. 1. *Takasagoagonum scotus*, gen nov. and sp. nov., ♀.

pointed (holotype) or narrowly rounded (paratype) at apex.

Pronotum (Fig. 5) moderately convex, widest behind one-third or before two-fifths, WP/WH 1.48, 1.49, WP/LP 1.35, 1.35, WP/WBP 1.38, 1.38, WBP/WAP 1.11, 1.17 in two ♀♀; surface faintly, transversely rugose, pubescent punctures sparse; microsculpture distinct, forming fairly transverse meshes on disc, distincter and isodiametric at apical and basal areas; apex even at median area, border complete or evanescent at middle; apical angles well protrudent, rounded, with six to eight somewhat long setae; base gently rounded at median area, gently rounded-oblique at lateral areas, not or obscurely bordered; basal angles obtuse, somewhat dull at apex; lateral margins well arcuate at greatest width, slightly roundly or evenly or slightly sinuately, fairly contracted anteriorly, fairly contracted posteriorly, faintly or shallowly sinuate far before basal angles; anterior marginal setae before to behind one-third (one additional seta present at greatest width on right margin in paratype as in Fig. 1), posterior setae at six-sevenths to nine-tenths, slightly separated from and distinctly breaking lateral margins; basal foveae rather deep, gently convex outside.

Wings one-fourth as long as elytra. Elytra convex, widely elliptic, widest a little before middle, WE/WP 1.51, 1.62 in two ♀♀, one and two-fifths to less than one and one-half times as long as wide; surface densely pubescent-punctate; microsculpture distinct, forming fully transverse meshes; basal border relatively short, moderately sinuate, moderately oblique outward, forming obtuse angle at shoulder opposite interval



Figs. 2–6. *Takasagoagonum scotus*, gen. nov. and sp. nov.
2. Head. 3. Segment 4 of left fore tarsus. 4. Segment 4 of left hind tarsus.
5. Pronotum (punctures, pubescence and setae omitted). 6. Left stylus.

7; lateral margin widely rounded at humeral area, thence almost evenly or somewhat roundly, fairly dilated towards middle; apical sinuation very shallow, without inner plica; apex rounded; striae moderately impressed, not punctate; scutellary striole moderately impressed; intervals flat or very weakly convex; pores of marginal series not countable owing to pubescent punctures.

Hind coxae with inner seta, viz. trisetose; fore tarsi of ♀ shallowly bisulcate on segments 1 and 2 or 1 to 3; segments 1 to 3 of mid and hind tarsi distinctly bisulcate, inner sulcus as deep as outer sulcus, interspace of sulci carinate; segment 4 of hind tarsi (Fig. 4) faintly bisulcate, outer lobe three-fourths to four-fifths as long as median length of segment 4, one and three-eighths times as long as inner lobe; hind tarsi more than one and one-fifth to one and two-sevenths times as long as head width (♀), segment 1 a little less than one and two-thirds to one and five-sevenths times as long as segment 2, segment 5/segment 1=0.73, 0.73 in two ♀♀.

Ventral side impunctate and glabrous, but mentum with some large punctures (punctures faint in paratype) on lateral areas, head distinctly, transversely rugose; L/W of metepisterna 1.19, 1.26 in two ♀♀, front border effaced at outer front area, outer border evanescent at front outer area; sternite 6 of ♀ almost even or gently rounded at apex, inner setae fairly behind level of outer setae.

Basal segment of styluses (Fig. 6) with more than fifteen rather short setae at apical area, apical segment gently curved, with three or four spines on ventral outer margin.

*Distribution.* Formosa.

*Type-series.* Holotype: ♀, VII–VIII, 1973, Liu gui-Xiang, W.-L. CHEN leg., through Mr. S. NAKAMURA, deposited in Laboratory of Insect Identification and Taxonomy, Nat. Inst. Agr. Sci. Paratype: 1 ♀, same as holotype.

*Notes on the etymon of the specific name.* The specific name *scotus* is derived from a Greek noun *σκότος* (darkness)—not from a Latin noun Scotus (Scotchman)—and therefore uninflected in neuter and feminine genera. SCHENKLING regards scotus as a Latin adjective, writing "scotus, a, um, schottisch" in his Erklärung der wissenschaftlichen Käfernamen aus REITTER's Fauna Germanica, p. 71 (1917) and Nomenclator Coleopterologicus (Zweit. Aufl.), p. 224 (1922), but I am sceptical of his account. According to LEWIS and SHORT's Latin Dictionary (Oxford), Scoticus or Scotticus is the adjective standing for Scottish.

# Occurrence of *Harpalus* (*Pseudoophonus*) *horni* JEDLIČKA in Honshu, Japan (Coleoptera, Carabidae)

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Recently Mr. TAKAAKI AONO lived in Kurashiki City sent me three specimens of a species of *Harpalus* taken from Okayama Prefecture by himself. The general form and the dark legs remind me of *H.* (*Pardileus*) *calceatus* (DUFTSCHMID), but the fifth tarsal segment is not spinose but setose on the ventral side. During the course of identification I have noticed these specimens agree with the descriptions of *H.* (*Pseudoophonus*) *horni* given by JEDLIČKA in 1928 and SCHAUBERGER in 1930.

Thirteen species of *Pseudoophonus* of Japan have been revised in Fauna Japonica, Carabidae, Harpalini (1973) by myself, and I supplement *H. horni* in this paper.

Here I wish to give my hearty thanks to Mr. T. AONO for his offering the specimens.

## *Harpalus* (*Pseudoophonus*) *horni* JEDLIČKA

"Ashiguro-gomokumushi"

*Harpalus* (*Pardileus*) *Horni* JEDLICKA, 1928, Wien Ent. Zeit., 45: 92–93, 94 (China: "Tsingtau"); SCHAUBERGER, 1929, Col. Centralbl., 3: 184.

*Harpalus* (*Pardileus*) *Jedličkai* SCHAUBERGER, 1929, Col. Centralbl., 3: 184–185 (China: "Hweisin in der Provinz Kansu").

*Pardileus Horni* JEDLIČKA: SCHAUBERGER, 1930, Col. Centralbl., 4: 182–183, 189–190.

*Description.* Length 11.5–12.5 mm. Width 4.5–4.9 mm.

Black, shiny, elytra rather mat in ♀; labrum and mandibles dark reddish brown, antennae, palpi and tarsi reddish brown, lateral margins of pronotum and posterior half of lateral margin to apical margin of elytra somewhat reddish, femora and tibiae dark reddish brown or reddish black, apex of femora, base and apex of tibiae less dark or more reddish; ventral side reddish black.

Head convex, minutely, somewhat densely punctate, dorsal side and tempora glabrous; microsculpture rather faint or somewhat distinct,

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almost isodiametric ; eyes well convex ; clypeus without additional setae ; antennae hardly reaching base of pronotum ; labrum not emarginate at apex ; mentum with tooth relatively narrow, longer than wide, pointed at apex, two setae rather short ; palpigers (Fig. 3) with distinct longitudinal carina, carina not extending outside.

Pronotum (Fig. 5) moderately convex, widest a little before middle, WP/WH 1.47, 1.49, 1.50, WP/LP 1.35, 1.39, 1.42, in two ♂♂ and one ♀ respectively ; surface glabrous, with large compact punctures (punctures partly confluent) at basal area and in lateral furrows, small, somewhat dense punctures at apical area, with sparse minute punctures on disc, basal punctate area not interrupted at middle ; microsculpture rather distinct, forming moderately or fairly transverse meshes ; apex even, border effaced at middle ; apical angles not protrudent but obtuse and rounded ; base almost even ; basal angles obtuse, fairly rounded ; lateral margins distinctly bordered at posterior half, roundly, moderately contracted anteriorly, almost evenly, gently contracted posteriorly ; lateral furrows narrow ; marginal setae behind one-third ; median line fine, punctate at basal area, evanescent at apical area, faintly reaching basal border ; anterior and posterior transverse impressions faint ; basal foveae shallow to somewhat deep, not or slightly convex at outside area.

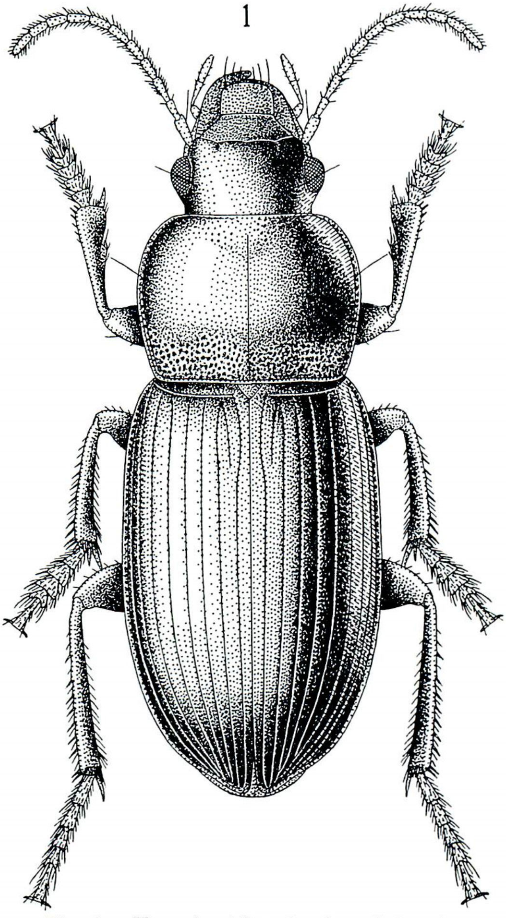
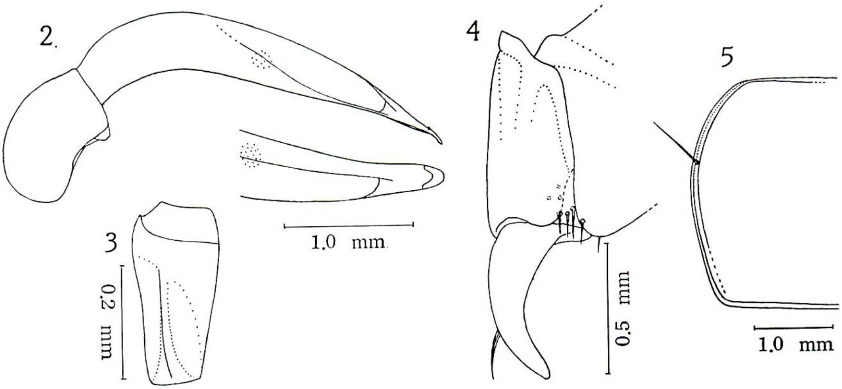


Fig. 1. *Harpalus* (*Pseudoophonus*) *horni* JEDLIČKA, ♂.

Elytra convex, elongately elliptic to elliptic-ovate, widest at middle, WE/WP 1.15, 1.16, 1.20 in two ♂♂ and one ♀ respectively, one and one-half to one and three-fifths times as long as wide in ♂, one and one-half times in ♀; surface glabrous (a little pubescence visible on interval 9), with rather dense, small punctures on intervals 8 and 9 and along basal border on intervals 1 to 7, with large punctures on lateral explanate part, not or minutely, sparsely punctate on other areas; microsculpture rather distinct and forming moderately transverse meshes at basal half in two ♂♂, distincter and almost isodiametric or forming slightly transverse meshes at basal half in one ♀, isodiametric at apical half in ♂ and ♀; basal border distinctly rounded-oblique outward, forming 90° angle at shoulder; shoulder somewhat dentate; lateral margin slightly to moderately dilated towards middle; apical sinuation rather distinct; apex somewhat rounded; striae well impressed, fairly punctate; intervals gently convex, intervals 7 and 8 without additional pores.

Hind femora with row of four or five setae near hind margin; fore tibiae with generally five spines at anterior outer margin, apical spur obscurely rounded-angulate at margins; in mid tarsi of ♂ segment 1 without adhesive hairs ventrally, segment 2 one and one-fifth to -fourth times as wide as long; in hind tarsi segment 1 as long as to a little longer than segment 2 (proportion 1.00–1.04) in ♂, one and one-seventh times as long as segment 2 in ♀, segment 5 fully longer than segment 1 (proportion 1.46, 1.50 in two ♂♂, 1.37 in one ♀), with five setae on either ventrolateral margin.

Ventral side of head rather sparsely pubescent at lateral areas, pro-,



Figs. 2–5. *Harpalus (Pseudoophonus) horni* JEDLIČKA.
2. Aedeagus. 3. Palpiger of right labial palpus.
4. Female genitalia. 5. Pronotum.

meso- and metasternum rather densely punctate-pubescent except at central area of metasternum, punctures distinct, proepisterna faintly, meso- and metepisterna distinctly punctate, sternites 2 and 3 densely punctate-pubescent at median area, sternite 4 sparsely, sternite 5 very sparsely, pubescent at median area, sternite 6 glabrous, sternites 1 to 6 more or less punctate at lateral areas; L/W of metepisterna 1.23, 1.31 in one ♂ and one ♀ respectively.

Aedeagus (Fig. 2) moderately arcuate, gently deflexed before apex; surface somewhat rugose behind middle, microsculpture distinct, isodiametric; apical lamella more than twice as long as wide at base, lateral margins almost parallel, apex rounded.

Basal segment of styluses (Fig. 4) with three setae at outer apical area, apical segment with some short and fine setae on outer side; hemisternites with two setae at apical area.

*Distribution.* Japan: Honshu—Tanei, Soja, Okayama Pref. and Bichû (near Takara dam), Okayama Pref. (T. Aono leg.). Korea. China.

*Remarks.* The aedeagus contains before the middle near the right side one copulatory piece which is not well observable in the left lateral view nor in the dorsal view.

I revise in the final place my key to the Japanese species of *Pseudoophonus* given in Fauna Japonica, Carabidae, Harpalini in p. 77 as follows:—

12. Apical spur of fore tibiae well dentate on both margins; elytral striae not punctate……………………*H.* (*P.*) *sinicus sinicus* Hope
— Apical spur of fore tibiae not dentate on margins; elytral striae faintly to fairly punctate ……………………13
13. Legs brown, faintly reddish; elytra rather densely pubescent at apical area and on intervals 8 to 10 ……………………*H.* (*P.*) *babai* Habu
— Femora and tibiae dark reddish brown or reddish black; elytra not pubescent……………………*H.* (*P.*) *horni* Jedlička

# New or Little-known Elateridae (Coleoptera) from Japan, XXII

By Hitoo Ôhira

## *Thurana iriei* sp. nov. (Negastriinae) (Fig. 1)

(Japanese name: Irie-keshimame-kometsuki)

Female. Length 1.5 mm, width about 0.5 mm. Body small and ovate, noticeably convex above; surface rather shining, yellow brown to dull brown excepting head, disc of pronotum, median portion of elytra more or less darker and dark brown to infuscate; vestiture fine and recumbent, pale yellow on all over.

Head gently convex between eyes, slightly impressed on median portion of between antennae; surface sparsely and evenly punctulate; clypeal margin well ridged and narrowly carinated, rounded and feebly impressed at middle; eyes large and somewhat prominent. Antenna short, not reaching to posterior angle of pronotum, basal segment robust and subovate; second segment small and subcylindrical, third subclavate and a little shorter than second; fourth to tenth segments moniliform and each segment gradually compressed towards extremity; apicalmost segment ovate, clearly longer than preceding one. Pronotum trapezoid, clearly wider than its length (length and width measured medially) and widest across posterior angles; sides slightly sinuate just before posterior angles, rounded at middle,

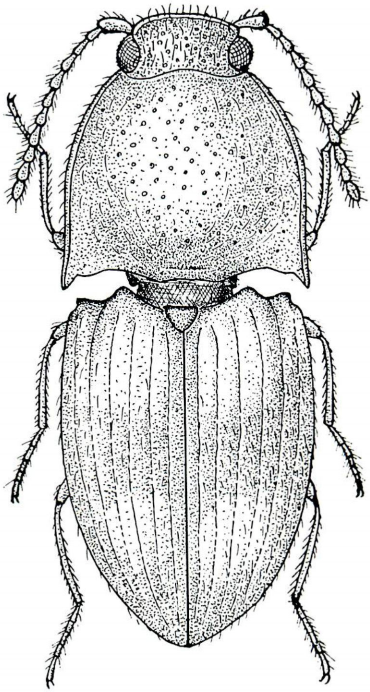


Fig. 1. *Thurana iriei* sp. nov. in dorsal surface, female.

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〔Ent. Rev. Japan, Vol. XXX, Nos. 1/2, pp. 11–12, Oct., 1977〕

thence gradually converging towards anterior angles; disc dome-like, quite lacking median longitudinal impression or smooth line on middle; surface sparsely and evenly punctulate, with interspaces of punctures smooth and shining; posterior angles short projecting behind and weakly divergent, each with a long, distinct carina above, which is prolonged anteriorly and reaching to anterior margin. Scutellum broad and semicircular, flattened, punctulate and pubescent. Elytra about 1.6 times as long as its basal width; sides subparallel at basal half, thence rounded and gradually converging towards extremities, which are normally rounded; intervals weakly elevated excepting more or less depressed sutural ones, punctulate and feebly sinuate. Prosternal sutures each double and out-curved, with apex weakly divergent and shallowly grooved; prosternal process not inclined behind procoxal cavities. Metacoxal plates strongly dilated inwardly, with each posterior margin angulated near basal portion. Legs of moderate length, with tarsi and claws simple.

Male unknown.

Holotype: ♀, Mt. Omoto-dake in Ishigaki I. of the Ryukyus, 8–V, 1974, H. IRIE leg.

Distribution: Ishigaki I. of the Ryukyus, Japan.

This new species is somewhat allied to *Thurana scita* (CANDÈZE, 1896) from Java, but can be distinguished from the latter in having larger and broader body, lighter colouration on the disc of pronotum and elytra, etc. The species belong to the genus *Thurana* STIBICK, 1971 (Pacific Insects, 13 (2): 371–390) hitherto known from Java and Sumatra districts, but I could find from the Ryukyus as indicated in this paper, where the genus has not been recorded. The holotype is deposited in the collection of H. ÔHIRA.

# On Two *Pterostichus* Species Found in Caves in Niigata Prefecture, Japan (Coleoptera, Carabidae)

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Thanks to Dr. K. Baba I have examined lots of specimens of carabid beetles from Niigata Prefecture, Honshu, among which there are several specimens of two *Pterostichus* species collected in caves by himself. There being no record concerning *Pterostichus* species found in caves in Japan, although the two species are not genuine cave-dwellers, I refer to them in this place.

Before going further I wish to express my heartfelt gratitude to Dr. K. Baba for his offering the valuable materials.

*Abbreviations.* LP: length of pronotum. WBP: width of base of pronotum. WE: width of elytra. WF: width of narrowest part of frons between eyes (Fig. 2). WH(e): width of head measured at eyes (Fig. 2). WH(t): maximum width of head measured at tempora behind eyes (Fig. 2). WP: width of pronotum.

## *Pterostichus* (*Paralianoe*) *macrogenys* Bates, 1883

"Nikkô-ôzu-naga-gomimushi"

(Pl. 1, figs. 1–3, 5, 6; Text-figs. 1, 2, 5)

Specimens examined: 3 ♂♂, VIII. 19, 1972, 1 ♀, X. 20, 1972, Ôsawa Cave, Muramatsu, Niigata Pref., K. Baba leg. They are 13.5–16.0 mm in length including mandibles, 4.4–5.0 mm in width.

This species is distributed from Aomori Prefecture (2 ♂♂, Hiraka, K. Shimoyama leg., 1 ♀, Jûniko, A. Abe leg.)[1] to Niigata Prefecture—the west limit is Renge-tôge (1 ♀, K. Baba leg.) so far as I am aware—and is rather variable; in addition to the above specimens I measured the following:—2 ♂♂, 1 ♀, Nasu, Tochigi Pref. (S.-I. Uéno leg.), 1 ♀, *do.* (M. Inaizumi leg.), 1 ♀, Nikkô, Tochigi Pref. (M. Oda leg.) (type-locality), 1 ♂, 3 ♀♀, Katashina, near Oze, Gumma Pref. (A. Habu leg.), 1 ♂, 3 ♀♀, Mt. Yahiko, Niigata Pref. (K. Baba leg.), 5 ♂♂, 2 ♀♀,

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[1] They are smaller, 12.5–13.5 mm in length, 4.0–4.2 mm in width.

〔Ent. Rev. Japan, Vol. XXX, Nos. 1/2, pp. 13–17, pl. 1, Oct., 1977〕

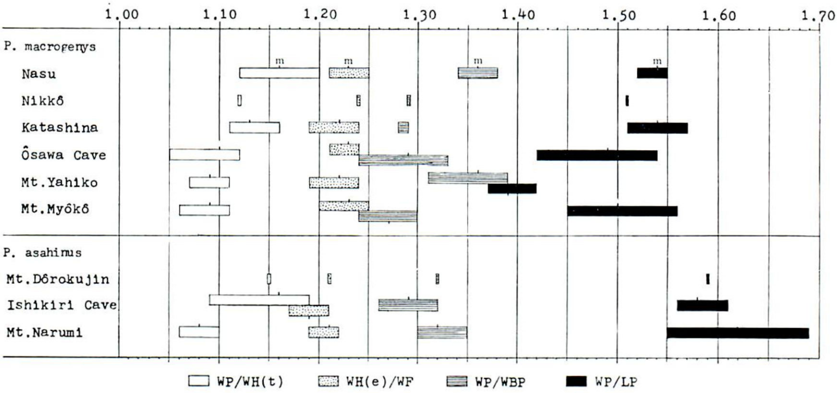

Fig. 1. Proportions in head and pronotum of *Pterostichus macrogenys* BATES and *P. asahinus* HABU et BABA. m : mean.

Mt. Myôkô, Niigata Pref. (K. BABA leg.). The proportions are illustrated in Fig. 1. The specimens from Mt. Yahiko have the pronotum longer than usual as WP/LP evinces.

The elytra are a little less than one and one-half to a little more than one and three-fifths times as long as wide, WE/WP 1.17–1.18, mean 1.17, in Nasu ex., 1.24 in Nikkô ex., 1.18–1.24, mean 1.21, in Katashina ex., 1.13–1.19, mean 1.16, in Ôsawa Cave ex., 1.16–1.23, mean 1.21, in Mt. Yahiko ex., 1.14–1.21, mean 1.17, in Mt. Myôkô ex. The basal border is singularly effaced and interrupted at the base of the fourth interval in all the four specimens from Nasu and three out of the four from Katashina, but is complete in other specimens.

The sixth sternite of the male (Fig. 5), the male genitalia (Pl. 1, figs. 1–3) and the styluses (Pl. 1, figs. 5, 6) are referred in the following species.

### *Pterostichus* (*Paralianoe*) *asahinus* HABU et BABA, 1960²⁾

"Echigo-ôzu-naga-gomimushi"

(Pl. 1, figs. 4, 7; Text-figs. 1, 3, 4, 6)

Specimens examined: 3 ♂♂, 1 ♀, IX. 2, 1972 (1 ♂ teneral), 1 ♂, 1 ♀, IX. 20, 1972, Ishikiri Cave, Nakajô, Niigata Pref., K. BABA leg.

This species was described from a single female specimen as the subspecies of *P. macrogenys,* but these two species are fully different in

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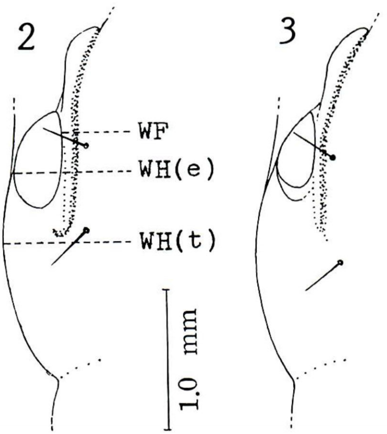
2) *Pterostichus* (*Paralianoe*) *macrogenys asahinus* HABU and BABA, 1960, Akitu, 9: 62, fig. (Japan: Mt. Dôrokujinmine).



Figs. 2, 3. Heads at left area. 1. *Pterostichus macrogenys* Bates from Ôsawa Cave, Niigata Pref. WF, WH(e), WH(t): see abbreviations in text. 2. *P. asahinus* Habu et Baba from Ishikiri Cave, Niigata Pref.

the male despite the fact that the discrimination is not necessarily distinct in the female.

The length is 14.5–16.8 mm (Ishikiri Cave ex.), 15.7–17.6 mm (Mt. Narumi ex. except one very small ♀ mentioned in the footnote 3), the width 4.6–5.0 mm (in the former), 4.9–5.2 mm (in the latter).

The eyes (Fig. 3) are generally less convex and smaller than in *P. macrogenys* (cf. WH(e)/WF in Fig. 1). The second segment of the antennae generally has one rather developed secondary seta near the apex on the outer side (Fig. 4), rarely without it, sometimes moreover with one or two shorter setae as illustrated in Fig. 4–B, C, but it is generally without any seta in *P. macrogenys* with some exceptions.

The pronotum is shorter than in *P. macrogenys* (cf. WP/LP in Fig. 1); the proportions in the above six specimens from Ishikiri Cave, 1 ♀ from Mt. Dôrokujinmine, Mts. Asahi (holotype) and 3 ♀♀[3] from Mt. Narumi, Niigata Pref. (K. Baba leg.) are indicated in Fig. 1. The pronotum is always with rather dense small punctures at the outside area of the basal foveae, but without them or with a few faint ones in *P. macrogenys*.

The elytra are almost same as in *P. macrogenys,* one and one-half to less than one and three-fifths times as long as wide, WE/WP 1.14 in Mt. Dôrokujinmine ex., 1.12–1.17, mean 1.15, in Ishikiri Cave

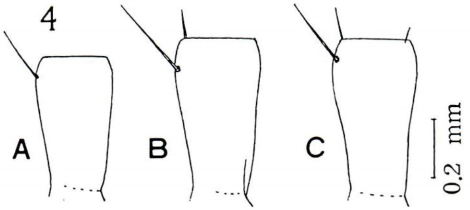


Fig. 4. Segments 2 of left antenna of *Pterostichus asahinus* Habu et Baba. A. Mt. Dôrokujinmine, Niigata Pref. (holotype). B. Mt. Narumi, Niigata Pref. C. Ishikiri Cave, Niigata Pref.

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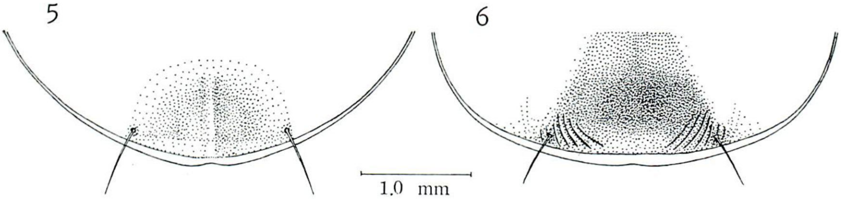
[3] One extremely small female specimen (11.5 mm in length, 3.6 mm in width) is excluded.

ex., 1.09–1.17, mean 1.12, in Mt. Narumi ex.; the basal border is complete.

The fore tarsi of the female are only spinose, without any adhesive hair nor long seta, on the ventral side[4].

The sixth sternite of the male (Fig. 6) is with the median concavity fully deeper and more extending anteriorly than in *P. macrogenys* and reaching the fifth sternite, without a median longitudinal carina, and is distinctly rugose around the setae and well convex outside the median concavity before each seta. The male sixth sternite (Fig. 5) of *P. macrogenys* is with the median concavity fully shallow, shorter, faintly, longitudinally carinate in the middle, and not rugose nor convex.



Figs. 5, 6. Sternites 6, ♂.
5. *Pterostichus macrogenys* Bates from Nasu, Tochigi Pref.
6. *P. asahinus* Habu et Baba from Ishikiri Cave, Niigata Pref.

The aedeagus (Pl. 1, fig. 4) is more curved than in *P. macrogenys* (Pl. 1, figs. 1–3), the apical part is more twisted to the left side and the apical lamella is not reversed to the right side. The right paramere is characteristic, fully bent (practically 90°) at the middle, wider in the lateral view, fully wider in the dorsal view, and the apex is dilated and sinuate near the middle in the dorsal view, with a distinct protuberance at the ventral inner angle. The right paramere in *P. macrogenys* is almost straight though somewhat uneven, rather narrow.

I have found no specific dissimilarity in the female genitalia (Pl. 1, figs. 5–7) between the two species.

*Distribution.* Japan: Honshu (Niigata Pref.)—Mt. Narumi, Mt. Dôrokujinmine (Mts. Asahi) and Ishikiri Cave, Nakajô. I have examined one small female specimen (13.5 mm in length, 4.0 mm in width) from Suyoshi, Nagaoka, Niigata Pref. (K. Baba leg.); it has the pronotum punctate like in *P. asahinus*, but its body is rather slender. I leave it undetermined until male specimens from the same locality are available.

Explanation of Plate 1.

1–3. Male genitalia of *Pterostichus macrogenys* Bates (1. Nasu, Tochigi Pref.;

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[4] Regarding an unusual characteristic on the ventral side of the female fore tarsi in *P. macrogenys*, see Habu, 1961, Akitu, 10: 10–11, figs. 1–4.

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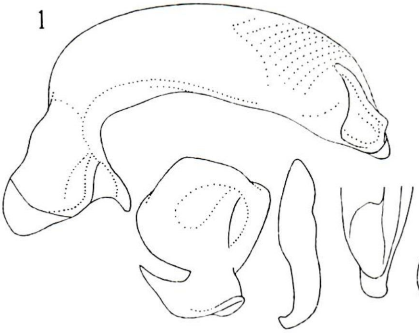

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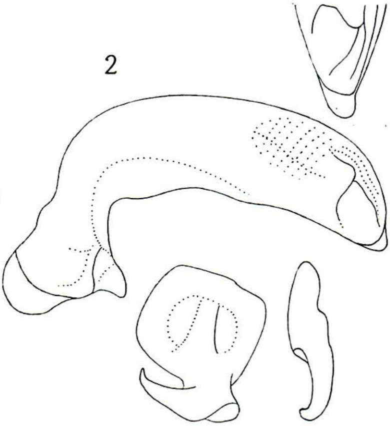

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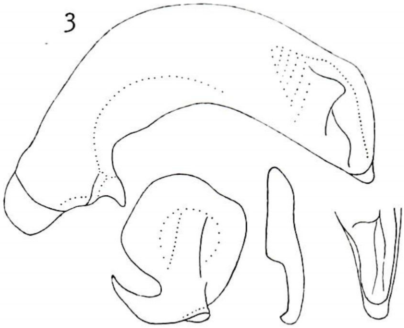
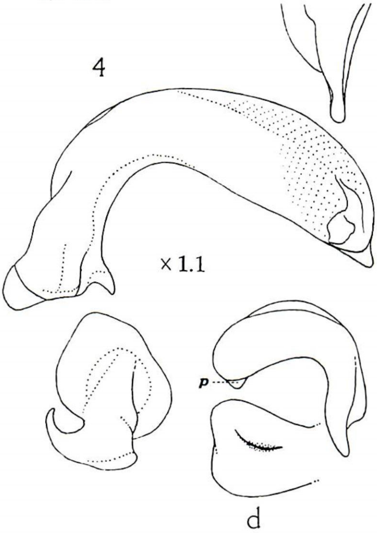


1.0 mm

4



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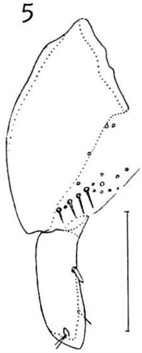

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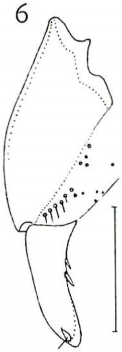

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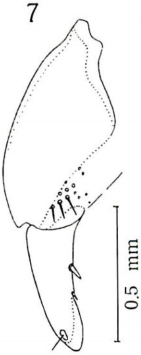

(A. HABU del.)

2. Mt. Myôkô, Niigata Pref.; 3. Ôsawa Cave, Muramatsu, Niigata Pref. (slightly teneral)).

4. *Do.* of *P. asahinus* HABU et BABA from Ishikiri Cave, Nakajô, Niigata Pref. d: dorsal side of right paramere at apical half. *p*: protuberance on ventral inner angle.

5–6. Left styluses of *P. macrogenys* BATES (5. Katashina, near Oze, Gumma Pref.; 6. Mt. Myôkô, Niigata Pref.).

7. *Do.* of *P. asahinus* HABU et BABA from Ishikiri Cave, Niigata Pref.
(The male genitalia are drawn from dried specimens, the female genitalia from dipped ones)

# Chrysomelidae (Coleoptera) Collected in China by P. M. HAMMOND and in Korea by M. JOSIFOV

By BLAGOY GRUEV

University of Plovdiv, Bulgaria

I want to express my gratitude to Dr. M. JOSIFOV from the Zoological Institute in Sofia who presented his material of Chrysomelidae to me collected by him in Korea, and to Dr. C. JOHNSON from the Manchester Museum who loaned to me the Mr. P. M. HAMMOND's material collected in China. I am also grateful to Prof. Dr. S. KIMOTO from the Kurume University who helped me with my work determining two of the species discussed below and doing possible the publication of my paper in his country.

## Subfamily Eumolpinae

### *Basilepta fulvipes* (MOTSCHULSKY)

*Nodostoma fulvipes* MOTSCHULSKY, 1860, Schrenk's Reisen Amurl., 2: 176.

Known from: Siberia, Mongolia, China (Heilungkiang, E. Manchuria, Shantung, Kiangsu, Chekiang, Fukien, Hupeh, Szechuan, Sikang, Yunnan, Kwangsi), Korea, Japan (GRESSITT & KIMOTO, 1961; KIMOTO & KAWASE, 1966).

New material: NE China—Heilungkiang (Harbin), June 1966, 4 exs. and July 1965, 24 exs., leg. P. M. HAMMOND; det. S. KIMOTO. A little part of the specimens are entirely red-brown, all the rest are metallic green with pronotum, legs and head red-brown.

### *Chrysochus chinensis* BALY

*C. chinensis* BALY, 1859, Ann. Mag. Nat. Hist., (3) 4: 125.

Known from: E. Siberia, China (Inner Mongolia, Kirin, Heilungkiang, Liaoning, Hopei, Kansu, Shansi, Shantung, Kiangsu, Chekiang, Hupeh, Yunnan), Korea, Japan (GRESSITT & KIMOTO, 1961).

New material: NE China—Heilungkiang (Harbin), June 1966, 7 exs., leg. P. M. HAMMOND; det. S. KIMOTO.

## Subfamily Chrysomelinae

### *Chrysolina aurichalcea* (MANNERHEIM)

*Chrysomela aurichalcea* MANNERHEIM, 1825, In HUMMEL, Essais Ent., 4: 39.

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〔Ent Rev. Japan, Vol. XXX, Nos. 1/2, pp. 19-24, Oct., 1977〕

Known from: Siberia, Mongolia, China (Hopei, Honan, Kansu, Chensi, Shantung, Kweichow, Yunnan, Kwangsi, Anhwei, Fukien, Kwangtung, Hunan, Szechuan, Chekiang, Hupeh, Shensi, Tibet, Manchuria, Kwangsi), Korea, Saghalien, Japan, Ryukyu Is., Taiwan, N. Vietnam, Burma (GRESSITT & KIMOTO, 1963; KIMOTO & KAWASE, 1966).

New material: NE China—Heilungkiang (Harbin), June 1966, 9 exs., leg. P. M. HAMMOND. The specimens are coppery-violet or lead-greenish.

### *Ambrostoma quadriimpressum* MOTSCHULSKY

*Chrysomela quadriimpressa* MOTSCHULSKY, 1845, Bull. Mosc., 18 (1): 109; *A. quadriimpressum* MOTSCHULSKY, 1860, Schrenk's Reisen Amurl., 2: 205.

Known from: Siberia, Mongolia, N. China (Liaoning, Hopei, Shantung, Kirin, Harbin), Korea (GRESSITT & KIMOTO, 1963).

New material: NE China—Heilungkiang (Harbin), June 1966, 14 exs., leg. P. M. HAMMOND.

### *Colaphellus bowringii* BALY

*C. bowringii* BALY, 1865, Ann. Mag. Nat. Hist., (3) 15: 35.

Known from: China (Hopei, Kansu, Shensi, Shantung, Kiangsu, Chekiang, Kiangsi, Szechuan, Kweichow, Kwangtung, Hupeh, Liaoning, Kirin, Anhwei, Fukien, Hunan, Kwangsi), N. Vietnam (GRESSITT & KIMOTO, 1963).

New material: NE China—Heilungkiang (Harbin), June 1966, 6 exs. and July 1965, 121 exs., leg. P. M. HAMMOND.

### *Gastrophysa atrocyanea* MOTSCHULSKY

*G. atrocyanea* MOTSCHULSKY, 1860, Schrenk's Reisen Amurl., 2: 222.

Known from: E. Siberia, China (Liaoning, Hopei, Hupeh, Hunan, Kiangsu, Kiangsi, Fukien, Chekiang, Szechuan, Kansu), Korea, Japan, N. Vietnam (GRESSITT & KIMOTO, 1963).

New material: NE China—Heilungkiang (Harbin), June 1966, 2 exs. and July 1965, 2 exs., leg. P. M. HAMMOND.

### *Gastrophysa polygoni* (LINNAEUS)

*Chrysomela polygoni* LINNAEUS, 1758, Syst. Nat., ed. 10: 370.

Known from: Europe, W. Asia, Siberia, N. America, N. China (Inner Mongolia, Liaoning, Hopei), Korea (GRESSITT & KIMOTO, 1963).

New material: NE China—Heilungkiang (Harbin), July 1965, 4 exs., leg. P. M. HAMMOND.

### *Paropsides duodecimpustulata* (GEBLER)

*Paropsis duodecimpustulata* GEBLER, 1825, In HUMMEL, Essais Ent., 4: 54.

Known from: Siberia, China, Korea, Japan, N. Vietnam, Burma, Assam (GRESSITT & KIMOTO, 1963).

New material: Korea—Bogjân, 20 km NE from Kesông, 21-23, May 1975, 1 ex., leg. M. JOSIFOV. The specimen belongs to the typical colour form (*P. d. duodecimpustulata*).

### *Gonioctena fulva* (MOTSCHULSKY)

*Spartophila fulva* MOTSCHULSKY, 1860, Etudes Ent., 9: 41.

Known from: E. Siberia, China (Harbin, Erzendjanzy, Hopei, Kiangsu, Chekiang, Kiangsi, Fukien, Kwangtung, Szechuan), N. Vietnam (GRESSITT & KIMOTO, 1963; BECHYNÉ, 1962).

New material: NE China—Heilungkiang (Harbin), June 1966, 9 exs., leg. P. M. HAMMOND. Some of the specimens have black legs, the rest have red ventral side and entirely red legs.

### *Entomoscelis orientalis* MOTSCHULSKY

*E. orientalis* MOTSCHULSKY, 1860, Schrenk's Reisen Amurl., 2: 222.

Known from: E. Siberia, China (Inner Mongolia, Kirin, Liaoning, Hopei, Kwangsi), Korea (GRESSITT & KIMOTO, 1963).

New material: NE China—Heilungkiang (Harbin), June 1966, 2 exs. and July 1965, 4 exs., leg. P. M. HAMMOND. All the specimens belong to the typical colour form with a dark stripe of the elytron.

## **Subfamily Alticinae**

### *Phyllotreta humilis* WEISE

*P. humilis* WEISE, 1887, Arch. Naturgesch., 53: 198.

Known from: Siberia, China (Shantung: Tsing-tau), Mongolia (HEIKERTINGER, 1941)

New material: NE China—Heilungkiang (Harbin), July 1965, 1 ex., leg. P. M. HAMMOND.

### *Phyllotreta vittula* (REDTENBACHER)

*Haltica vittula* REDTENBACHER, 1849, Fauna Austriaca: 531.

Known from: Europe, N. Africa, Caucasus, C. Asia, Siberia, Korea (HEIKERTINGER, 1941; GRESSITT & KIMOTO, 1963).

New material: NE China—Heilungkiang (Harbin), July 1965, 4 exs., leg. P. M. HAMMOND.

### *Phyllotreta rectilineata* CHEN

*P. rectilineata* CHEN, 1939, Sinensia, 10 (1-6): 50.

Known from: Siberia, S. China (Kwangsi, Kiangsi, Hupeh, Fukien), Japan, N. Vietnam (HEIKERTINGER, 1941; GRESSITT & KIMOTO, 1963).

New material: NE China—Heilungkiang (Harbin), July 1965, 1 ex., leg. P. M. HAMMOND.

### *Phyllotreta vittata* (FABRICIUS)

*Crioceris vittata* FABRICIUS, 1801, Syst. El., 1: 469.

Known from: Holarctica, China (Kansu, Kiangsu, Hupeh, Anhwei, Kwangtung, Kwangsi), Hainan I., Korea (Sunan, Samsŏk, Purjŏng, Kjŏngsŏng, Hamdžu, Hjangsan, Paldang-Seoul), Ryukyu Is., Taiwan, Vietnam, Siam, Sumatra (HEIKERTINGER, 1941; GRESSITT & KIMOTO, 1963; WARCHALOWSKI, 1969; JOLIVET, 1974).

New material: NE China—Heilungkiang (Harbin), July 1965, 1 ex., leg. P. M. HAMMOND; Korea — Sujangsan near Hedzu, 20, May 1975, leg. M. JOSIFOV.

### *Aphthona modesta* WEISE

*A. modesta* WEISE, 1887, Arch. Naturgesch.: 200.

Known from: E. Siberia, S. Manchuria, Korea (Quel-part I.), Tibet (HEIKERTINGER, 1944).

New material: Korea—Kymgangsan, 800 m, 26–27, May 1975, 1 ex., leg. M. JOSIFOV.

### *Longitarsus scutellaris* (REY)

*Thyamis scutellaris* REY, 1873, In MULS & REY, Ann. Soc. Linn. Lyon (n.s.), 20. 231.

Known from: Europe, Sibiria, Saghalien, Mongolia, China (Hopei, Fukien), Japan, N. Vietnam (WARCHALOWSKI, 1970).

New material: NE China—Heilungkiang (Harbin), July 1965, 1 ex., leg. P. M. HAMMOND. The specimen has not a clearly darkened suture of the elytra. Aedeagus examined.

### *Altica caerulescens* (BALY)

*Graptodera caerulescens* BALY, 1874, Trans. Ent. Soc. Lond.: 190.

Known from: Japan, S. China, Korea (Chemulpo, Samsŏk, Kangsŏ), Ryukyu Is., Taiwan, India (GRESSITT & KIMOTO, 1963; WARCHALOWSKI, 1969).

New material: Korea—Sôkom near Sunan, 17, May 1975, 1 ex., leg. M. JOSIFOV.

### *Chaetocnema concinna* (MARSHALL)

*Chrysomela concinna* MARSHALL, 1802, Ent. Brit., 1: 196.

Known from: Europe, Siberia, China, Korea (Kankyo Hokudo, Čhongdžin-si), Japan (GRESSITT & KIMOTO, 1963; WARCHALOWSKI, 1969).

New material: Korea—Puadopri, 20, July 1974, 1 ex., leg. M. JOSIFOV.

### *Chaetocnema heikertingeri* LJUBISCHEV

*C. heikertingeri* LJUBISCHEV, 1963, Rev. Ent. USSR, 42 (4): 858–863.

Known from all the territories between W. Europe and Siberia. Unknown from China.

New material: NE China—Heilungkiang (Harbin), July 1965, 1 ex., leg. P. M.

HAMMOND. Aedeagus examined.

## *Chaetocnema tibialis breviuscula* (FALDERMANN)

*Haltica breviuscula* FALDERMANN, 1837, Nouv. Mém. Mosc., 5: 349.

Known from: E. Europe, S. Russia, W. Asia, Altai, Irkutsk.

New material: Korea—Dzikha-ri, Chângdzin, 9, June 1975, 33 exs., leg. M. JOSIFOV. The specimens do not differ from all the specimens of *breviuscula* from E. Bulgaria, Crimea, N. Kasakhstan and Altai that I had been available for a comparison. Aedeagus examined.

## *Psylliodes attenuata* (KOCH)

*Haltica attenuata* KOCH, 1803, Ent. Hefte, 2: 34.

Known from: Europe, Siberia, SW China (Kweichow), Korea, Japan (GRESSITT & KIMOTO, 1963).

New material: NE China—Heilungkiang (Harbin), June 1966, 22 exs., leg. P. M. HAMMOND.

### **Subfamily Cassidinae**

## *Aspidomorpha transparipennis* (MOTSCHULSKY)

*Coptocycla transparipennis* MOTSCHULSKY, 1860, Etudes Ent., 9: 41.

Known from: Amur, Korea (Yong-mun San), NE China, Japan.

New material: Korea—Sujang-san near Hedzu, 4, June 1975, 1 ex., leg. M. JOSIFOV.

## *Thlaspida lewisii* (BALY)

*Coptocycla Lewisii* BALY, 1874, Trans. Ent. Soc. Lond.: 214.

Known from: Amur, Ussuri, E. China, Korea, Japan (GRESSITT & KIMOTO, 1963).

New material: Korea—Kymgang-san, 800 m, 26-27, May 1975, 3 exs., leg. M. JOSIFOV.

## *Cassida nebulosa* LINNAEUS

*C. nebulosa* LINNAEUS, 1758, Syst. Nat., ed. 10: 365.

Known from: Europe, Siberia, N. China, Korea, Japan (GRESSITT & KIMOTO, 1963).

New material: Korea—Onpho-ri near Kjôngsông, 12, June 1975, 3 exs., leg. M. JOSIFOV.

## *Cassida piperata* HOPE

*C. piperata* HOPE, 1842, Proc. Ent. Soc. Lond., 1: 62.

Known from: China, Taiwan, E. Siberia, Korea, Japan, N. Vietnam, Luzon (GRESSITT & KIMOTO, 1963).

New material: Korea—Nampho, 7, June 1975, 1 ex., leg. M. JOSIFOV.

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# A New Species of the Genus *Sybra* from Japan (Coleoptera: Cerambycidae)[1]

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Fukuoka 812, Japan

Synopsis: A new species, *Sybra miscanthivola* from Yonaguni Island is described.

In the present paper, I describe a new species *Sybra miscanthivola* from Yonaguni Island, Okinawa Prefecture.

I wish to express my sincere gratitude to Professor Y. HIRASHIMA and Associate Professor K. YANO of Kyushu University for their continuous guidance. My thanks are due to Dr. K. KUSAMA of Shizuoka University and Mr. K. SUGINO who offered valuable specimens.

## *Sybra miscanthivola* sp. nov.

Body reddish brown, covered with whitish yellow pubescence; those on legs, abdominal sternites and antennae denser and more finely arranged; antennae light brown with hairs on ventral sides of segments 2–9 sparse, rather long and oblique; pubescence on head, scutellum, prothorax, elytra, apices and apical halves of lateral faces of all tibiae, ventral sides of tarsi and mesepimeron light yellowish; prothorax with four dull stripes in addition to a central intermittent stripe of light yellow pubescence; elytra with eight alternative stripes, which are intermittent, of light yellowish brown and white pubescence.

*Male:* Body slender, broadest at middle of elytra, head very deeply punctured, vertex flattened, sometimes with a short median furrow, eyes faceted, inferior eye lobe two-thirds as long as gena below it, antennae six-sevenths (mean) as long as body, relative lengths of each segment as follows:— 2.0: 0.5: 3.0: 3.3: 2.8: 2.7: 2.6: 2.2: 2.0: 2.0: 2.2.

Prothorax subcylindrical, broadest at four-sevenths from base, eight-sevenths as long as broad, narrowly constricted subapically, dully constricted subbasally, and portion near apex weakly convex and that near

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[1] Contribution from the Entomological Laboratory, Faculty of Agriculture, Kyushu University, Fukuoka (Ser. 3, No. 30).

〔Ent. Rev. Japan, Vol. XXX, No. 1/2, pp. 25–29, pl. 2, Oct., 1977〕

base concave ; prothorax uniformly, coarsely and deeply punctured.

Scutellum small, elevated, median portion slightly concave, and apex rounded.

Elytra two and half times as long as broad, broadest at middle, slightly narrowed toward base as seen from above, with latero-basal portions more or less angulated ; lateral margins of elytra, as seen from above, gradually narrowed toward apex and sharply obliquely truncate there ; basal portion of elytra not strongly convex dorsally, latero-subbasal portions (about one-fifth from base) weakly depressed ; elytra regularly and deeply punctured.

Legs short ; femora clavate ; tibiae and tarsi coarsely punctured.

Mesosternum impunctate ; mesepisternum, mesepimeron and metepimeron densely punctured ; lateral portions of abdominal sternites as well as apex of sternite 7 weakly punctured ; relative lengths of abdominal sternites 4–7 as follows :— 2.0 : 1.4 : 1.1 : 2.0 ; apex of sternite 7

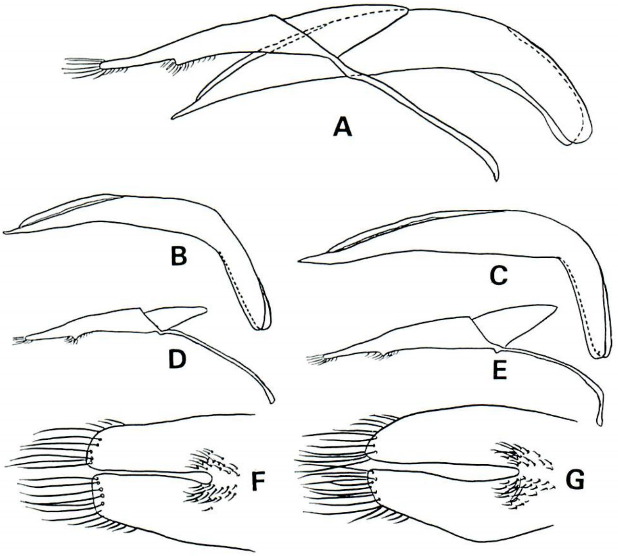

Fig. 1. Male genitalia of *Sybra miscanthivola* sp. nov. and *S. ordinata* BATES from Yonaguni Island. A : Male genitalia of *S. miscanthivola*, lateral view ; B : Median lobe (aedeagus) of *S. miscanthivola*, lateral view ; C : Median lobe (aedeagus) of *S. ordinata*, lateral view ; D : Tegmen of *S. miscanthivola*, lateral view ; E : Tegmen of *S. ordinata*, lateral view ; F : Lateral lobes (parameres) of *S. miscanthivola*, ventral view ; G : Lateral lobes (parameres) of *S. ordinata*, ventral view.

weakly round.

Hind wing reduced and very short.

Male genitalia: median lobe with short median struts strongly curved, relative length of median lobe to median struts, 5.5 : 3.0; ventral edge of median orifice is strongly projected; median foramen sharply elongated; tegmen provided with basal-piece and roof; basal-piece weakly sclerotized; lateral lobes broad, weakly and obliquely truncated at apex; apices of lateral lobes with long hairs; ventral part of basal portion of lateral lobes elevated conically, strongly sclerotized, covered with short hairs; ringed part geniculated at the widest portion, hemmed.

*Female:* Body rather large; vertex without median furrow; relative lengths of antennal segments :— 1.6 : 0.6 : 3.0 : 3.3 : 2.8 : 2.3 : 2.2 : 2.0 : 1.9 : 1.6 : 1.8; prothorax cylindrical, slightly longer than broad (3.3 : 3.0), weakly constricted subapically and subbasally, and weakly concave near base; scutellum less elevated than in male; elytra relatively shorter than in male, broadest at seven-thirteenths from base; relative lengths of abdominal sternites 4–7 :— 2.0 : 1.8 : 1.5 : 2.3.

*Measurements*: Body length 9.4±1.1 (7.7–11.0) and body width 2.7±0.3 (2.1–3.1) in male in mm; body length 10.3±0.7 (9.2–12.1) and body width 3.0±0.2 (2.8–3.3) in female in mm.

*Type materials*: Holotype ♂ (Type No. 2047, Kyushu Univ.), Sonai–Mt. Urabu, Yonaguni Island, Okinawa Prefecture, 22. V. 1975, H. MAKIHARA leg.; Paratypes: 1 ♂, Sonai, 16. V. 1973, K. SUGINO leg., 1 ♀, Sonai, 17. V. 1973, K. SUGINO leg., 2 ♂♂, Mt. Urabu, 30. III. 1974, K. KUSAMA leg., 1 ♂, 1 ♀, Mt. Urabu, 31. III. 1974, K. KUSAMA leg., 2 ♂♂, 1 ♀, Mt. Urabu, 5. IV. 1974, K. KUSAMA leg., 1 ♂, 3 ♀♀, Sonai–Mt. Urabu, 9. VI. 1974, H. MAKIHARA leg., 1 ♂, 1 ♀, 10. VI. 1974, same locality and leg., 1 ♂, 1 ♀, 13. VI. 1974, same locality and leg., 1 ♂, 14. VI. 1974, same locality and leg., 1♂, 4♀♀, 22. V. 1975, same locality and leg., 1 ♀, 23. V. 1975, same locality and leg.

*Type depository*: The holotype of this species is preserved in the collection of the Entomological Laboratory, Faculty of Agriculture, Kyushu University, Fukuoka 812, Japan.

*Diagnosis*: This new species is closely related to *Sybra ordinata* BATES, and correlationships between antennae and body of *miscanthivola* and *ordinata* are similar, but it differs from *ordinata* by the following points: Body more or less smaller (in male) and slenderer; prothorax less strongly constricted at apex and base, broadest at middle (broadest near base in *ordinata*), and less strongly concave at base; scutellum more elevated; elytra narrowed at base and broadest about at middle (broadest at base in *ordinata*); disc of elytra not strongly convex basally (broadly and distinctly convex basally in *ordinata*); elytra with hair stripes distinct (obscure in *ordinata*) and different in color (light yellowish brown and white in *miscanthivola* and yellowish brown in *ordinata*); hind wing reduced (well developed in *ordinata*); and in male genitalia, the median struts less strongly curved, and apex of ringed part only slightly curved in lateral view (strongly curved in lateral view in *ordinata*).

*Note*: All the specimens of the new species examined were collected on *Miscanthus sinensis* ANDERSS. and *M. sinensis* var. *gracillimus* HITCHC. (Gramineae). The new species is endemic to Yonaguni Island, Okinawa Prefecture.

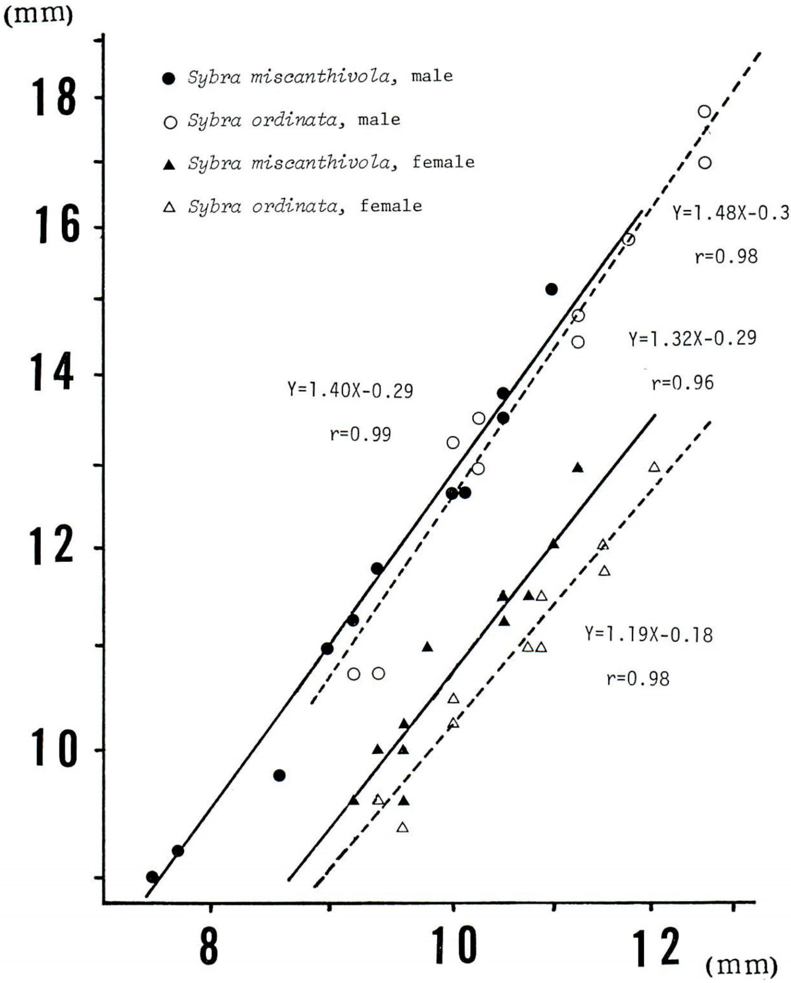

Fig. 2. Correlationships between antennae and body of the two species, *Sybra miscanthivola* sp. nov. and *S. ordinata* BATES. Body length of the equation (x co-ordinate axis) and antennal length (y co-ordinate) in logarithmic co-ordinate in addition to regression lines and correlation coefficients are shown. Black dots, *S. miscanthivola*, male; circles, *S. ordinata*, male; black triangles, *S. miscanthivola*, female; triangles, *S. ordinata*, female; solid lines, *S. miscanthivola*; broken lines, *S. ordinata*.

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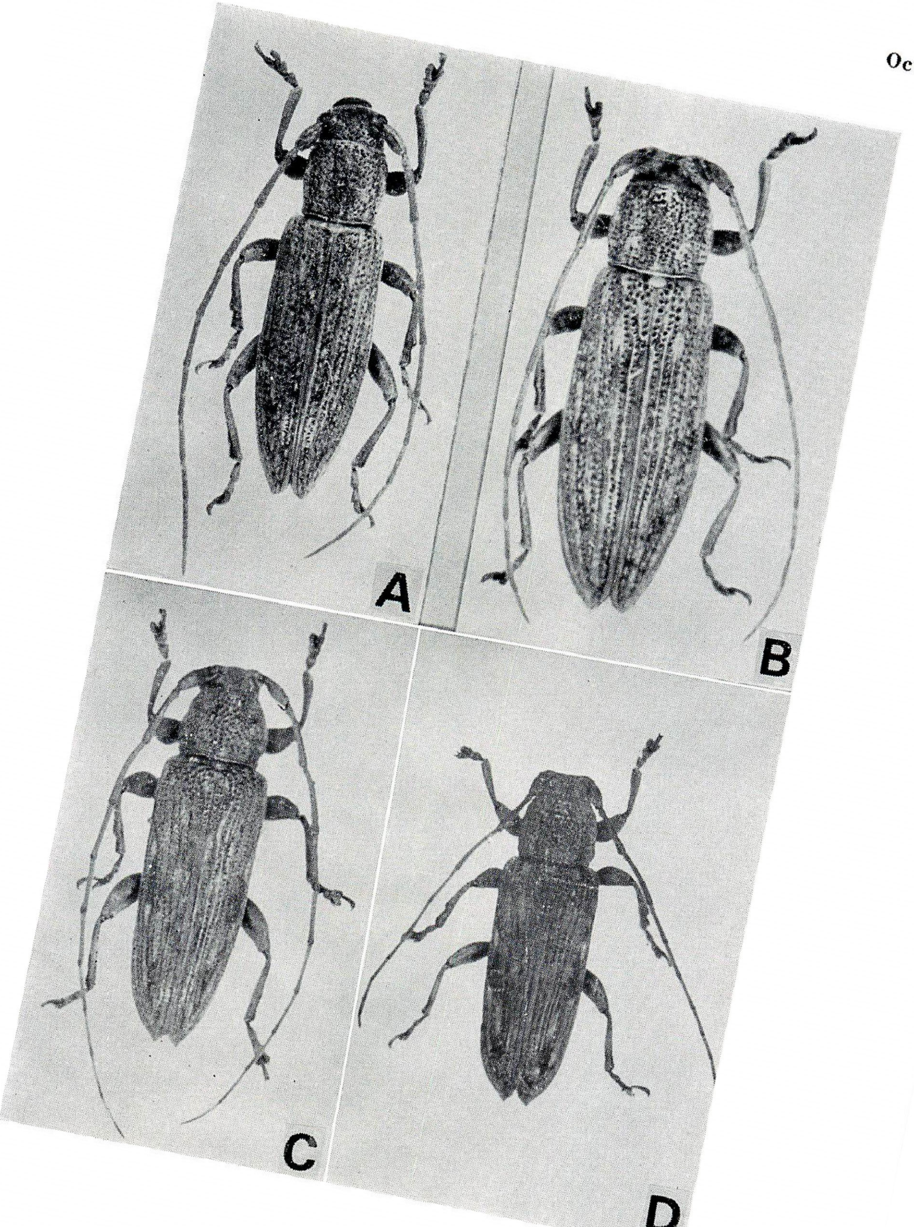

(H. Makihara photo.)

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## Explanation of Plate 2.

*Sybra miscanthivola* sp. nov. and *S. ordinata* BATES from Yonaguni Island.
A: *S. miscanthivola*, male; B: Ditto, female; C: *S. ordinata*, male;
D. Ditto, female.

# A New Species of the Genus *Pidonia* from Taiwan (Coleoptera, Cerambycidae)

By Mikio Kuboki

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Sakuragaoka, Setagaya-ku, Tokyo 156, Japan

The members of the cerambycid *Pidonia* Mulsant occur mainly in the temperate zone of the Holarctic Region, and more than 50 species have been known up to the present. The knowledge on the Formosan species belonging to this genus is, however, still insufficient. So far as I know, there is no other species of *Pidonia* than 7 species which have been reported or described from Taiwan by Hayashi (1968, 1969, 1974). In this paper, a new species collected from the mountainous area is added to them. This species differs from the closely related Japanese species, *P. maculithorax* Pic, in structural details of male genitalia and some external characters.

Before going further, I wish to express my hearty thanks to Prof. Masao Hayashi, Osaka Jonan Women's Junior College, for his kindness given me in various ways. I am also greatly indebted to Prof. Hiromasa Sawada, Assist. Prof. Nobuo Gokan and Assist. Prof. Yasuaki Watanabe, Tokyo University of Agriculture, for their constant guidance and helpful suggestions, and to Prof. Chong-zhi Kuan, Taiwan Provincial Chung-Hsieng University, for his valuable assistance during my collecting trip in Taiwan. Besides, I am grateful to Mr. Akinori Yoshitani for his assistance in preparing the illustration inserted in this paper.

## *Pidonia* (*Pidonia*) *paradisiacola* sp. nov.

Body large, relatively elongate and furnished with fine pale fulvous pubescence.

Length: 7.6–10.6 mm (male), 9.2–10.9 mm (female); breadth: 1.7–2.4 mm (male), 2.1–2.7 mm (female).

Color. Body reddish fulvous to yellowish brown; head, prothorax, and scutellum reddish brown, sometimes lateral parts of prothorax darkened; mouthparts yellowish brown except for reddish brown apex of each mandible; eyes and elytral markings black; in male base of first and second each sternite darkened, though not entirely black, and breast sometimes darkened. Elytral markings constant and similar to each other in both sexes; basal and sutural markings narrowly present, apical marking entirely lacking, latero-basal marking narrowly prolonged

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〔Ent. Rev. Japan, Vol. XXX, Nos. 1/2, pp. 31–34, Oct., 1977〕

towards shoulder, and always latero-basal, latero-median and latero-posterior markings fused with one another, forming a narrow longitudinal submarginal vitta ; legs brownish yellow ; mid- and hind femora sometimes darkened apically ; claws reddish brown in apical halves.

Structure. Head subquadrate and a little broader across eyes than prothorax (male, 1.09 : 1 ; female, 1.16 : 1) ; tempora slightly narrowed in anterior half and gently constricted in posterior half, almost impunctate and shining ; frons subvertical and transverse, covered with sparse punctures, bearing a fine but distinct median longitudinal furrow extending backwards to near vertex ; antennal tubercles weakly raised ; vertex coarsely punctured ; occiput finely punctured. Eyes prominent, moderately faceted, strongly emarginate at middle of internal margin. Antennae inserted just behind level across frontal margin of eyes, barely exceeding apical end of body (male) or hardly attaining elytral apex (female) ; first segment distinctly dilated towards apex, distinctly shorter than third segment, which is longer than the fourth and a little longer than basal two segments taken together (male, 1 : 0.88 ; female, 1 : 0.93) ; fifth the longest.

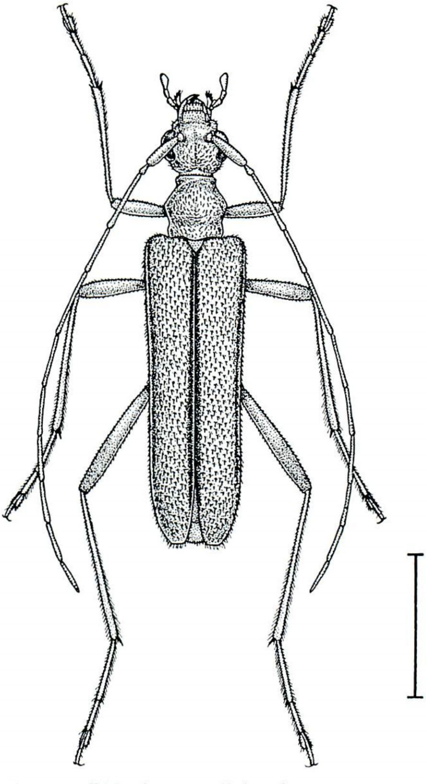


Fig. 1. *Pidonia paradisiacola* sp. nov., ♂, of Tsifeng in Nantou Hsien. Scale : 3 mm.

Prothorax distinctly (male, 1 : 0.86) or slightly (female, 1 : 0.94) longer than broad, strongly constricted both behind apex and before base, and rather angularly prominent laterally just before middle ; the breadth across the prominent portions being a little broader than base (male, 1 : 0.97 ; female, 1 : 0.98) ; apical margin obviously narrower than basal margin (male, 0.71 : 1 ; female, 0.69 : 1) ; disk convex above, finely and closely punctate, sparsely clothed with fine and short pubescence. Scutellum small and triangular, slightly longer than breadth, bearing thin pubescence on the surface. Elytra elongate, about 2.9 times (male) or about 2.7 times (female) as long as basal width, gradually narrowed posteriorly (male) or almost parallel-sided (female), and subtruncate at apices; surface finely closely punctate and sparsely suberectly pubescent; interspace between punctures narrower than the diameter of each puncture.

Legs relatively slender; femora weakly clavate, hind femora not reaching elytral apex in both sexes; tibiae linear; tarsi densely clothed with short pubescence on under surface; first segment of metatarsus distinctly longer than the following two taken together (male, 1 : 0.77; female, 1 : 0.72); third segment strongly dilated apically and deeply emarginate at middle of apex. Abdomen elongate and gradually convergent towards apex; surface of each sternite densely covered with extremely fine pubescence; in male fifth visible sternite rotundately emarginate at middle of hind margin, last visible tergite shallowly emarginate at middle of hind margin; in female, fifth visible sternite simple, last visible tergite very shallowly triangularly emarginate at middle of hind margin.

Male genital organ moderately sclerotized; median lobe relatively curved ventrally with cuspidate apex; lateral lobes nearly as long as median lobe, narrowly separated from each other in apical half; each apex narrowly rounded and with many terminal hairs.

*Type-series.* Holotype: ♂, allotype: ♀, 19. V. 1976, Tsifeng (about 2,300 m in alt.), Nantou Hsien, M. KUBOKI leg. Paratypes: 4♂♂, 2♀♀, same data as the holotype; 16♂♂, 5♀♀, 20. V. 1976, Tsifeng, M. KUBOKI leg.; 4♂♂, 2♀♀, 21. V. 1976, Tsifeng, M. KUBOKI leg.

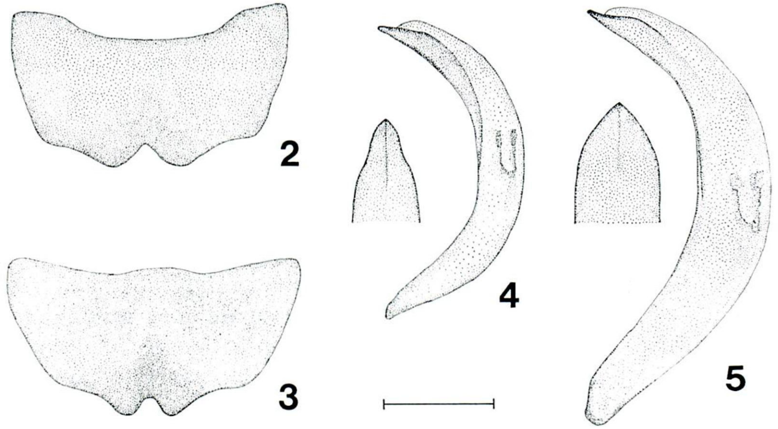
The holo- and allotypes are preserved in the collection of Entomological Laboratory of Tokyo University of Agriculture. Paratypes are deposited in the collection of National Science Museum, Tokyo, in Dr. HAYASHI's and in my private collections.

*Distribution.* Taiwan.

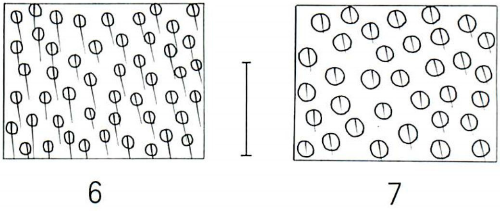
*Remarks.* This new species is closely similar to *P. maculithorax* PIC, but distinguished by the following key:—

1. Elytral disk obscurely punctured and closely furnished with fine pubescence (Fig. 6); fifth visible sternite of male triangularly emarginate at middle of hind margin (Fig. 2); median lobe of male genital organ relatively long and gently curved ventrally with acute apex (Fig. 5); elytral markings very variable: sutural marking narrowly present, apical marking narrowly present but sometimes lacking, basal marking narrowly present, latero-basal small, latero-median and latero-posterior markings narrow and elongate, frequently fused with each other; in male first and second sternites brownish yellow, rarely darkened on both sides ………… ………………………………………………………………………………… *P. maculithorax* PIC

— Elytral disk distinctly punctured and sparsely furnished with fine pubescence (Fig. 7); fifth visible sternite of male rotundately emarginate at middle of hind margin (Fig. 3); median lobe of male genital organ relatively short and strongly curved ventrally with cuspidate apex (Fig. 4); elytral markings constant and similar to



Figs. 2–5. 2, 3. Fifth visible abdominal sternite of male. 4, 5. Median lobe and its apex of male. 2, 5. *Pidonia maculithorax* Pɪᴄ. 3, 4. *P. paradisiacola* sp. nov. Scale : 0.5 mm.



Figs. 6–7. Punctuation on middle part of elytron. 6. *Pidonia maculithorax* Pɪᴄ. 7. *P. paradisiacola* sp. nov. Scale : 0.5 mm.

each other in both sexes ; basal and sutural markings narrowly present, apical marking entirely lacking, latero-basal marking narrowly prolonged towards shoulder, and always latero-basal, latero-median and latero-posterior markings fused with one another, forming a narrow longitudinal submarginal vitta ; in male base of first and second each sternite darkened, though not entirely black, breast sometimes darkened ··················································*P. paradisiacola* sp. nov.

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# Two New Species of Ground Beetles from Honshu, Japan (Coleoptera, Carabidae)

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The materials on which I describe one new *Tachys* and *Patrobus* species have mainly been found by Mr. Kaoru Tanaka who are earnestly collecting beetles in Yamaguchi Prefecture, Western Honshu and to whom I wish to express my heartfelt thanks for his kindly offering specimens.

## *Tachys* (*Eotachys*) *kaorutanakai* sp. nov.

"Kaoru-chibi-mizugiwa-gomimushi"

*Description.* Length 2.0–2.3 mm. Width 0.80–0.88 mm.

Reddish brown, faintly yellowish, somewhat pale, head half-shiny or rather mat, pronotum and elytra shiny, not or hardly iridescent, head dark except clypeus, elytra sometimes with obscure transverse dark band occupying median one-third, clypeus, labrum and mandibles light reddish brown, antennae reddish brown, basal two or three segments pale yellowish brown or brownish yellow, palpi and legs brownish yellow; ventral side light reddish brown, hypomera and epipleurae yellowish.

Head somewhat or gently convex; microsculpture distinct, isodiametric on disc; eyes glabrous, a little more convex than in *pallescens*, WH/WF 1.40–1.48, mean 1.43, in four ♂♂ ane five ♀♀; posterior supraorbital setae on or a little behind level of hind margin of eyes, a little more spaced from eyes than in *pallescens*; frontal impressions somewhat deep, diverging, faintly reaching posterior supraorbital setae; antennae reaching basal one-sixth of elytra, submoniliform, segment 2 slightly longer than segment 3, segment 11 one and one-half times as long as segment 10; foveae of mentum large and deep.

Pronotum gently convex, generally with faint small depression at disc between anterior marginal setae on either side, widest at or behind one-third, at most one and one-third times as wide as head, one and

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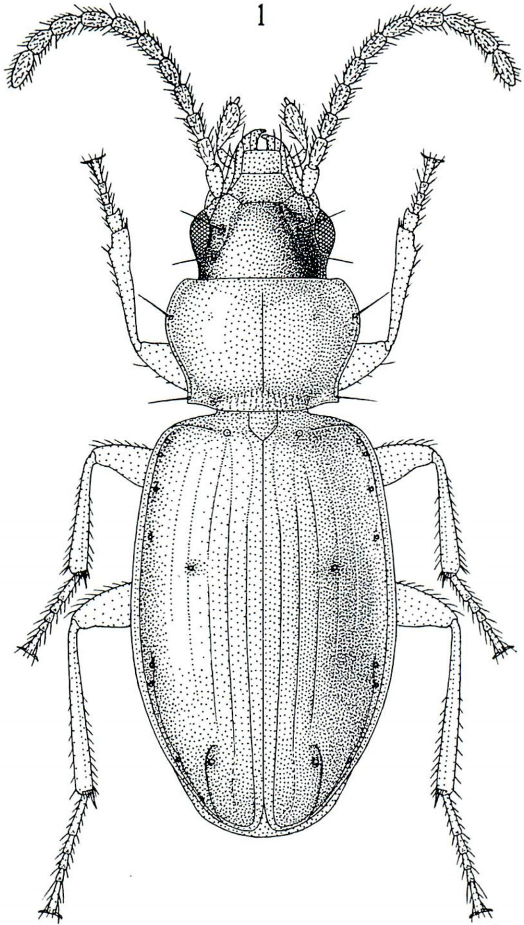


Fig. 1. *Tachys* (*Eotachys*) *kaorutanakai* sp. nov., ♂.

one-half times as wide as long (in four ♂♂ and five ♀♀ WP/WH 1.26–1.33, mean 1.31, WP/LP 1.43–1.54, mean 1.49, WP/WBP 1.28–1.35, mean 1.31), base as wide as apex (WBP/WAP 0.99–1.04, mean 1.01); surface longitudinally rugose at median basal area; microsculpture rather distinct, forming transverse meshes; apex even; apical angles not or hardly protrudent, somewhat rounded; base a little oblique at lateral areas; basal angles rectangular, with apex distinct, with obscure carina or without carina inside; lateral margins fairly arcuate, more contracted posteriorly than in *pallescens,* moderately sinuate before basal angles, anterior marginal setae at or before one-third, posterior setae a little before basal angles; median line fine, reaching neither extremity; anterior transverse impression faint, posterior impression deep, not interrupted at middle, almost even.

Wings developed. Elytra somewhat convex, almost flat at central area, somewhat ovate, widest at middle, one and three-eighths times as wide as pronotum (WE/WP 1.34–1.43, mean 1.38, in four ♂♂ and five ♀♀), one and one-half times as long as wide; microsculpture rather distinct or fairly distinct, forming transverse meshes; basal border ending opposite interval 4, widely rounded at shoulder; lateral margin indistinctly serrulate and with microscopic sparse hairs at basal one-fifth, somewhat roundly, moderately dilated towards middle; apical sinuation very shallow; apex fairly rounded; stria 1 rather deep, obscure at basal area, deeper at apical area, stria 2 similar to stria 1, obscure at basal area, shallow at apical area, stria 3 shallower than stria 2, obscure at basal area, indistinctly reaching basal pore, free at apex, stria 4 shallower than stria 3, free at base and apex, stria 5 obscure, hardly visible on apical half, stria 8 arising from before first pore of subapical group; intervals slightly convex, anterior dorsal pore on interval 4, adjoining stria 4 at one-third, posterior pore at four-fifths, behind hook of apical striole; apical striole distinct.

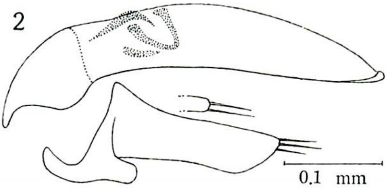


Fig. 2. Male genitalia of *Tachys* (*Eotachys*) *kaorutanakai* sp. nov.

Fore tarsi of ♂ with segment 1 fairly dilated. Prosternal process shallowly sulcate; metasternal process completely bordered, border thick at apex.

Aedeagus (Fig. 2) slender, very weakly curved; left paramere with three setae at apex, right paramere not reaching middle of left paramere, bisetose at apex.

*Distribution.* Japan: Honshu.

*Type-series.* Holotype: ♂, V. 19, 1976, Kamiube, Ube, Yamaguchi Pref., K. TANAKA leg., deposited in Nat. Inst. Agr. Sci. Paratypes: 1 ♀, V. 15, 1954, Sakaechô, Kita-ku, Tokyo Metropolitan District, T. YAMAGUCHI leg.; 3 ♂♂, 4 ♀♀, same as holotype.

*Remarks.* The new species well resembles *T.* (*Eotachys*) *pallescens* BATES, but the colour is more reddish, the head is always dark, with the eyes a little more convex (WH/WF 1.35–1.42, mean 1.38, in five ♂♂ and five ♀♀ of *pallescens*), the pronotum is more contracted posteriorly at the lateral margins (WP/WBP 1.21–1.28, mean 1.24, in five ♂♂ and five ♀♀ of *pallescens*), and the microsculpture of the pronotum and elytra is coarser and distincter and therefore their surface is not or hardly iridescent. The aedeagus contains three slender copulatory pieces behind the middle in the left lateral view like in *pallescens*.

## *Patrobus* (*Apatrobus*) *jakuchiensis* sp. nov.

"Jakuchisan-nurechi-gomimushi"

*Description.* Length 9.3–10.3 mm. Width 3.5–3.8 mm.

Black, shiny, elytra faintly brownish; palpi reddish brown, labrum, mandibles and legs dark reddish brown; ventral side dark reddish brown.

Head rather convex, punctate in and near frontal impressions and neck-constriction; microsculpture absent; neck-constriction deep; tempora fairly tumid, five-sixths to seven-eighths as long as eyes; eyes moderately convex; posterior supraorbital setae narrowly distant from neck-constriction, interspace five-sixths to eight-ninths as wide as interspace of anterior supraorbital setae; frontal impressions fairly deep, reaching clypeal setae, bifurcate posteriorly, outer impression reaching anterior supraorbital setae, inner impression a little extending beyond mid-eye level; antennae reaching basal one-fifth of elytra, segment 3 more than one and one-half to one and three-fifths times as long as segment 4 which is as long as or slightly longer than segment 5.

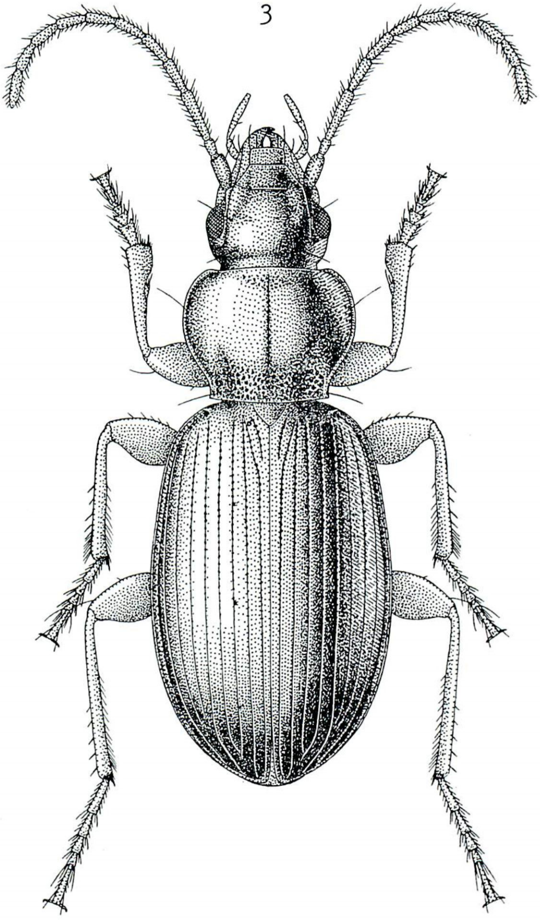


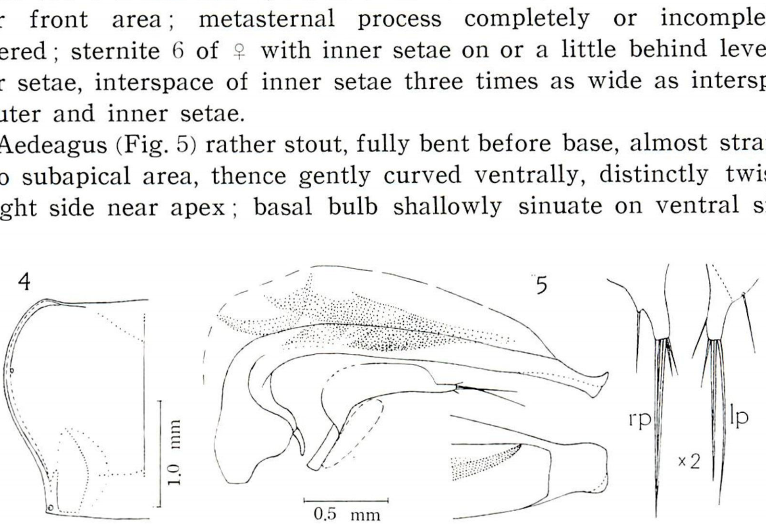
Fig. 3. *Patrobus* (*Apatrobus*) *jakuchiensis* sp. nov., ♂.

Pronotum (Fig. 4) gently convex, without depressions on level of anterior marginal setae, widest at two-fifths, at least one and one-third times as wide as head, at least one and one-fourth times as wide as long (in two ♂♂ and two ♀♀ WP/WH 1.32–1.37, mean 1.36, WP/LP 1.25–1.28, mean 1.27, WP/WBP 1.39–1.46, mean 1.42, WBP/WAP 1.00–1.05, mean 1.03); surface with large dense punctures at lateral and basal areas and in median line, with smaller, less distinct punctures at apical area, transversely, faintly rugose on disc; microsculpture hardly visible or obscure transverse meshes visible on disc; apex even or roundly, somewhat protrudent at middle; apical angles somewhat protrudent, rounded; base very slightly emarginate at middle, slightly oblique at lateral areas; basal angles rectangular or a little more than 90°, somewhat protrudent laterally as small tooth at apex, short obscure carina present; lateral margins bordered at posterior half, fairly rounded anteriorly, well contracted posteriorly, distinctly sinuate before basal angles, thence almost parallel up to posterior marginal setae; posterior marginal setae touching and breaking lateral margins; median line reaching neither extremity; basal foveae deep, hardly convex at outside area.

Wings reduced. Elytra somewhat convex, ovate, widest at middle, one and two-fifths times as wide as pronotum (WE/WP 1.37, 1.41, 1.43 in two ♂♂ and one ♀ respectively), less than one and four-sevenths times as long as wide; surface not punctate; microsculpture distinct, forming well transverse meshes; shoulder with obtuse tooth; lateral margin gently roundly, fairly dilated towards middle; apical sinuation very shallow; striae moderately impressed, punctate; scutellary striole similar to or shallower than striae, punctate; intervals slightly convex, interval 3 with three pores at one-fourth, at or behind middle and at seven-tenths to four-fifths, pores adjoining stria 3; marginal series composed of about ten pores.

Ventral side of head punctate in and near neck-constriction, pro-, meso- and metepisterna, mesosternum, lateral areas of pro- and metasternum, and anterolateral area of hind coxae distinctly punctate, sternite 1 rugosely punctate at lateral areas; L/W of metepisterna 1.13, 1.17, 1.21 in two ♂♂ and one ♀, bordered at front side, border evanescent at outer front area; metasternal process completely or incompletely bordered; sternite 6 of ♀ with inner setae on or a little behind level of outer setae, interspace of inner setae three times as wide as interspace of outer and inner setae.

Aedeagus (Fig. 5) rather stout, fully bent before base, almost straight up to subapical area, thence gently curved ventrally, distinctly twisted to right side near apex; basal bulb shallowly sinuate on ventral side;



Figs. 4, 5. *Patrobus* (*Apatrobus*) *jakuchiensis* sp. nov.
4. Pronotum. 5. Male genitalia. rp, lp: right paramere and left paramere at apical part.

apical part in lateral view long, well protrudent at dorsal apical angle, gently protrudent at ventral apical angle; apical part in dorsal view hardly turned to right side; apical lamella as long as wide at base, right and left margins sinuate, apex truncate, slightly sinuate at middle, left apical angle rounded, right apical angle obtuse; apical part of parameres not fully long, with three fully long setae and two rather short setae at apex in right paramere, with three fully long setae and one rather short seta at apex, one rather short seta at subapical area near ventral margin in left paramere.

*Distribution.* Japan: W. Honshu.

*Type-series.* Holotype: ♂, VI. 27, 1976, Mt. Jakuchi, Yamaguchi Pref., K. TANAKA leg., preserved in Nat. Inst. Agr. Sci. Paratypes: 1 ♂, 2 ♀♀ (one ♀ rather teneral), same as holotype.

*Remarks.* This new species is closely allied to *P.* (*Apatrobus*) *ishizuchiensis* HABU, but is distinguishable from it by the pronotum less convex, with a faint carina inside the basal angles, the elytra less convex, and the aedeagus hardly curved at the apical part in the dorsal aspect. The aedeagus has three copulatory pieces inside; one is rather sleeve-like, situated at the dorsal basal area, and the others are slender at the apical part, adjoining each other.

# A New Subspecies of *Dudusa sphingiformis* from Korea and Tsushima Island with Description of the Last Instar Larva (Lepidoptera, Notodontidae)

By Kentaro Nakatomi

This striking notodontid moth was found in Tsushima Island in 1972. The specimens of Korea and Tsushima Island are readily separable from those of North India and Nepal. In this paper I will describe a new subspecies from Korea and Tsushima Island.

To our surprise the larva was easily found on *Acer* in Tsushima Island by Mr. Hideo Nakajima. Nothing has been known of its life history or host plants. The last instar larva will be also described.

Before going further I wish express my hearty thanks to Mr. Toku Watanabe, Mr. Yutaka Arita of Meijo University, and Mr. Tetsuo Miyashita who allowed me to examine specimens in their valuable collections. I am also indebted to Mr. H. Nakajima for gift of material of early stage.

*Dudusa sphingiformis* is known to have three subspecies: the nominate subspecies (Sikkim, North India), *birmana* (Burma), and *coreana* (Korea, Japan).

### *Dudusa sphingiformis sphingiformis* Moore, 1872

Material examined. Central Nepal: 2 ♂♂, Rele Khola, 2400 m, near Mt. Annapurna, 14. VI. 1969 (T. Miyashita); 2 ♂♂, Leye, 2400 m, near Mt. Nilgiri, 23. VI. 1969 (T. Miyashita).

### *Dudusa sphingiformis coreana* **ssp. n.**

Externally, distinguished from the nominate subspecies by the broader, not angled postmedial fascia on the fore wing. The male genitalia is closely similar to that of nominate subspecies but is separable by the shape of valva.

Distribution. Korea, Japan (restricted to Tsushima Island, Kyushu).

Holotype ♂. Korea,: Mt. Sorak-san, 500 m, 4. VIII. 1974 (Y. Arita). In Meijo University (Nagoya).

Paratypes. Korea: 3 ♂♂, type locality, 3–4. VIII. 1974 (Y. Arita); 7 ♂♂, 6

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〔Ent. Rev. Japan, Vol. XXX, Nos. 1/2, pp. 41–42, pls. 3–5, Oct., 1977〕

♀♀, type locality, 10–16. VIII. 1974 (S. TERAMURA). Japan: 3 ♂♂, Are, Tsushima Island, Nagasaki Pref., 6. VIII. 1973 (T. WATANABE); 2 ♂♂, Mt. Ookuroyama, Tsushima Island, 2. VIII. 1973 (T. WATANABE).

## Description of the last instar larva of *D. sphingiformis*

External character. The larvae of *Dudusa* are ditinguished from any other by the presence of spines which apparently replace setae. In this species the following setae are replaced by the spines; SD1, SV on T1, D1, D2, SD1, L2, SV on T2–3, D1, SD1, L1, L2, SV on A1, D1, SD1, L1–3, SV on A2, D1, SD1, L1–3 on A3–6, D1, SD1, L1, L2, SV on A7–8, D1, D2, SD1, L, SV on A9, and setae on the anal shield, anal leg. Setae D on T2–3 and A8–9 are not so long as in *D. nobilis*.

Colour pattern. The head reddish brown without any markings. The body reddish brown with large white markings on lateral area of A1 and with broad black supraspiracular and spiracular lines. Between these lines white. Dorsal and subdorsal lines black. Spiracules black, each with a white lim. Thoracic legs black and prolegs concolorous with body. Spines black, these on A9–10 reddish brown with black ends.

Food plant. *Acer mono* MAXIM.

Material. Described from two specimens collected at the following locality by H. NAKAJIMA. Sasuna, Tsushima Island, Nagasaki Pref., Kyushu, 23. VIII. 1975.

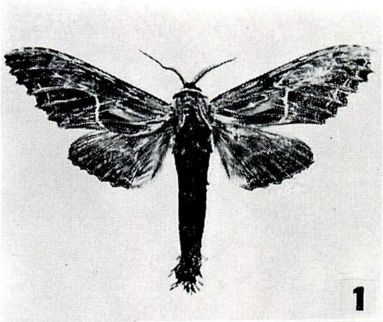
Egg, Earlier stages of larva and pupa are unknown.

### Explanation of Plates 3–5

Plate 3, fig. 1. *Dudusa sphingiformis coreana* ssp. n. (Korea).
2. ditto (Tsushima Island).
3. *Dudusa sphingiformis sphingiformis* MOORE (Nepal).
4. ditto.
5. *Dudusa sphingiformis coreana* ssp. n. (Korea).

Plate 4, fig. 6–7. *Dudusa sphingiformis coreana* ssp. n., male genitalia.
6: Korea. 7: Tsushima Island, Japan.
8. *Dudusa sphingiformis sphingiformis* MOORE (Nepal), male genitalia.

Plate 5, fig. 9. The last instar larva of *D. sphingiformis* feeding on *Acer mono* MAXIM.
10. Setal maps of the last instar larva of *D. sphingiformis*.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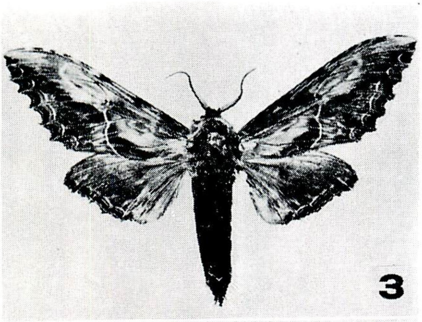
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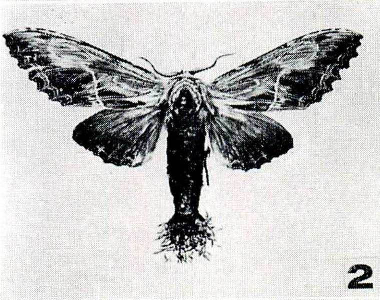
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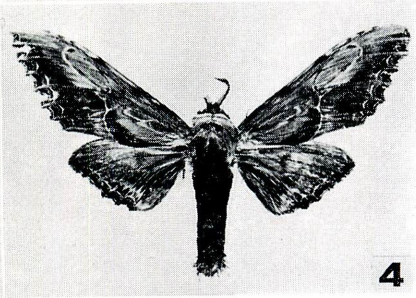
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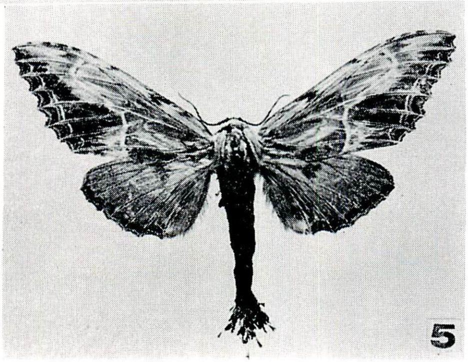
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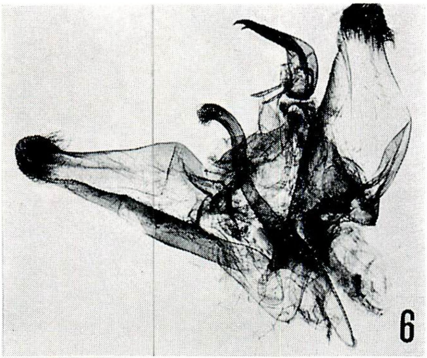
(K. Nakatomi photo.)



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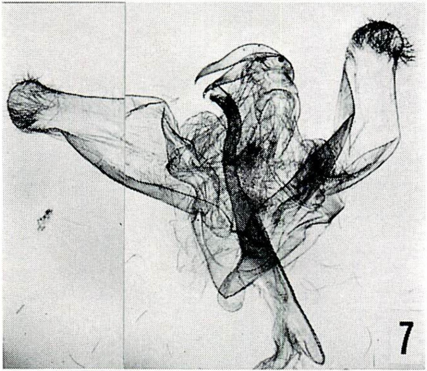

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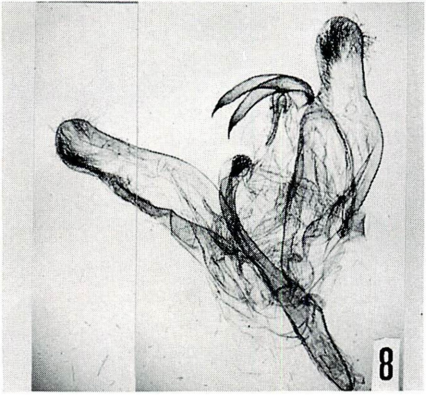

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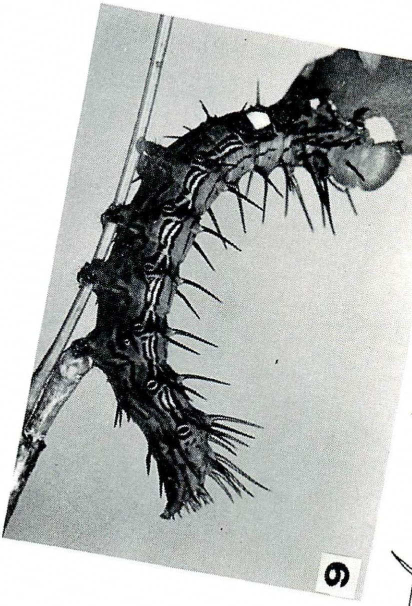
(K. NAKATOMI photo.)



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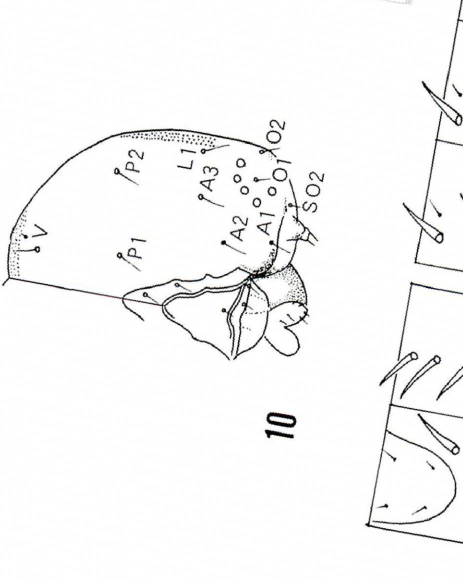
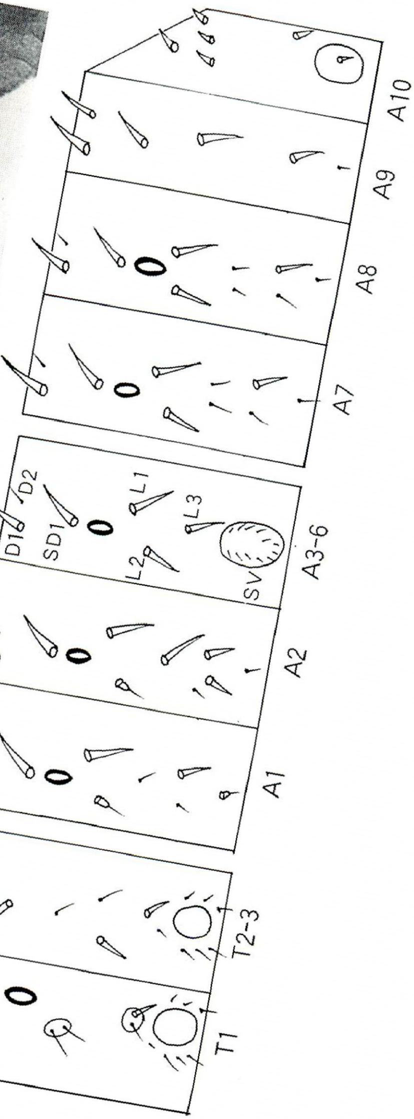

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(K. Nakatomi photo. & del.)

# A New *Monardis*-species from Japan 1)
# (Hym., Tenth.)

By TEIICHI OKUTANI

Entomological Laboratory, Faculty of Agriculture, Kobe University

A very small holarctic genus *Monardis* ENSLIN, 1914 has only two described species, namely the genotype species *M. plana* (KLUG, 1814) from Europe and *M. pulla* SMITH, 1969 from North America. Recently I have found the third species from Japan through the courtesy of Mr. T. MIYATA in Odawara City, which will be described in this paper.

Before going further I wish to express my hearty thanks to Mr. T. MIYATA for his kind presentation of many materials and guide to the abundant places in Hakone.

## *Monardis miyatai* n. sp.

Female: Length of body 7 mm.; length of fore wing 7 mm. Robust and dumpy. Black; labrum brown; clypeus light brown or somewhat yellowish; tegula, parapteron and lateral side of posterior corner of pronotum yellow; median part of caudal segment brown. Antenna black throughout. Legs yellow; fore coxa almost, middle one basal half, and hind one basally black; fore trochanter almost, middle one basally black, but hind one almost brown; femur light brown or reddish except whitish apex; tibia whitish except brownish apex; tarsus brown. Wings hyaline; venation and stigma dark brown or black. Head and body covered with white pubescence.

Antenna (Pl. 6, fig. 1) short and stout, and about 5 : 4 : 12 : 9 : 9 : 8 : 8 : 6.5 : 7 in relative length; scape stout, nearly as wide as long; pedicel about $\frac{2}{3}$ as wide as scape and a little longer than wide (ca. 8 : 7). Labrum rounded. Clypeus convex and truncate. Malar space about $\frac{3}{4}$ as long as a diameter of front ocellus. Supraclypeal area flat; supraclypeal fovea triangular in outline. Median fovea oval. Lateral fovea circular in outline and dorsally connected with antennal furrow. Frontal ridges bluntly developed. OOL : POL : COL = 11 : 8 : 8. Postocellar area about $\frac{4}{7}$ as long as wide, and with a shallow (obsolete in some paratypes) median longitudinal furrow attached to frontal furrow;

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1) Studies on Symphyta XXIX.

〔Ent. Rev. Japan, Vol. XXX, Nos. 1/2, pp. 43–46, pls. 6–7, Oct., 1977〕

lateral furrow distinct, but not reached occiput. Interocellar furrow distinct. Head seen from above rectangular, about twice as wide as long.

Thorax a little wider than head, and sparsely punctate all over including sternum; scutellum about ¾ as wide as long, and with about 20 large punctures on hind margin; post-tergite polished and without pubescence; postscutellum with several punctures and very sparsely pubescent; prepectus absent. Venation (Pl. 6, fig. 2) normal; first cubital cross vein medially atrophied; stub of analis apically bifid; hind wing with a middle cell. Hind tarsus about 15: 7: 5: 4: 6 in relative length; claws simple. Abdomen covered with pubescence and tergites somewhat microsculptured, but shining. Sawsheath (Pl. 6, figs. 3, 4) nearly rhombic in dorsal view and emarginate through the apical projections of the lateral angles. Saw slender and with about 36 lobe-like selullae (Pl. 6, fig. 5).

Male: Unknown, perhaps parthenogenetic.

Distribution: Honshu (Hakone and neighboring area).

Types: 3 ♀♀ (including holotype), 22-IV-1974 emerged from the larvae collected at Sengokubara in Hakone on 24-V-1973 by T. Miyata; 2 ♀♀, 4-V-1975, Mt. Komagatake in Hakone, by T. Miyata; 1 ♀, 30-V-1975, the top of Mt. Komagatake (1326 m) by me. All the types are preserved in my laboratory.

Larva (full grown, ultimate instar): Length 8-10 mm. Dumpy species.

Head yellowish brown covered with brown patches; vertex darker than ventral parts; eye and eye disk black and surrounding area somewhat darker. Body grayish green in feeding period but light brown before maturation, and cephalic and caudal parts somewhat brownish.

Head globose, slightly reticulate, sparsely setigerous with minute setae, and about ⅔ as wide as thorax. Frons (Pl. 6, fig. 6) semi-oval, and with about 15 minute setae arranged rather regularly; clypeus trapezoidal, with 2 setae on each side, and clypeal suture indistinct; labrum rounded, more or less asymmetrically incised at central margin, and with 3 setae on each side, central one of which very short; epipharynx (Pl. 6, fig. 7) with 7 spatulate setae and 3 normal setae on dextral side, but 9 and 2 on sinistral. Antenna 5-segmented, and basal segment largest. Mandibles (Pl. 6, figs. 8, 9) asymmetrical and without seta, dextral with 4 and sinistral with 5 distadentes. Maxillary palpus (Pl. 6, fig. 10) 4-segmented; 2nd and terminal segments subequal in length and longest; 2nd segment with a seta on outer side; 3rd segment with about 5 trichoid sensillae on apico-external side; palpifer with 2 setae; stipes with a seta; cardo without seta; galea digit-like and apically somewhat curved proximad; dextral lacinia with 9 setae along apical margin and sinistral with 12. Labial palpus 3-segmented (Pl. 6, fig. 11), each segment subequal in length and 2nd one with a seta on inner side; palpiger with 2 setae.

Cuticle microscopically verrucose (Pl. 6, fig. 12), without seta or hair, but with distinct warts (Pl. 6, fig. 13) on certain annulets.

Prothorax with 3, mesothorax-7th abdominal segments with 4, 8th one with 3 annulets on each tergum; dorsal parts of 9th and 10th abdominal segments fused and form a caudal plate (Pl. 6, fig. 14). Warty annulets are as follows: all of prothorax, 2nd and 3rd of mesothorax-8th abdominal segments. Warts are large and subcylindrical on prothorax and 8th-10th abdominal segments, short and subconical on mesothorax and 7th abdominal segment, and minute and thron-like on metathorax-6th abdominal segment. Caudal plate with many subcylindrical warts along the margin and dorsum; 10th abdominal segment with a pair of rather large somewhat upcurved thron-like protuberances near suranal lobe. The 3rd abdominal segment (standard segment, Pl. 6, fig. 15) with minute warts as follows: 2nd annulets with 4 and 3rd with 3 warts on each side, postspiracular area with 4, and subspiracular and surpedal lobes each with 3. Sur- and subanal lobes hairy.

Borer of the flower buds. One generation a year.

Above descriptions were based on 10 larvae collected on 29-V-1975 at Gora in Hakone by me.

Host plant: *Rosa hirtula* (REGEL) NAKAI. No other species of *Rosa* may be fed on.

Biological notes: The adults are active from late April in low land to late May in high land, just after the flower buds are out. The female lays her eggs one by one into the tissue of the leaflet near the bud. The hatching larva climbs up the petiole and stem to the bud into which it bores. After the larva bores into the bud, the hole is closed by its caudal plate. When the larva becomes full grown, it bites at the pedicel and the eaten bud falls down on the ground. The larva gets out of the bud and borrows into the ground to spin a cocoon in which pupation and hibernation occurs. The hibernating prepupae sometimes spend more than two winters.

Remarks: According to the literatures this species is easily recognized from *M. plana* by its hyaline wings, yellow legs and unforked warts of the larva, and from *M. pulla* by its hyaline wings and apically emarginate sawsheath.

## An addition to Japanese genera of Blennocampinae

This genus *Monardis* must be added to my key to Japanese genera of the subfamily Blennocampinae (1972) as follows:—

1. Stub of analis in fore wing apically furcate……………………………1a
— Stub of analis simple……………………………………………………… 8
1a. Claws simple, without subapical tooth or basal lobe; sawsheath with apical projections ……………………………………*Monardis* ENSLIN, 1914
— Claws with subapical tooth or apically bifid and with or without basal lobe; sawsheath usually without apical projections…………………………… 2

And the couplet 10 (p. 60) must be corrected as the genera *Stetomostethus* and *Apareophora* are opposite to each other.

## Literature

Enslin, E., 1914. Die Tenthredinoidea Mitteleuropas. *Deut. Ent. Ztschr.*: 203–309.

Lorenz, H. and Kraus, M., 1957. Die Larval Systematik der Blattwespen.: 1–339.

Okutani, T., 1972. A new genus and a key to Japanese genera of the subfamily Blennocampinae. *Ent. Rev. Japan*, 24 (1/2): 57–61, pl. 10.

Smith, D. R., 1969. Nearctic sawflies. I. Blennocampinae: Adults and Larvae. *Tech. Bul.* No. 1397. Agric. Res. Serv. U.S.D.A.: 1–179, pls. 1–14.

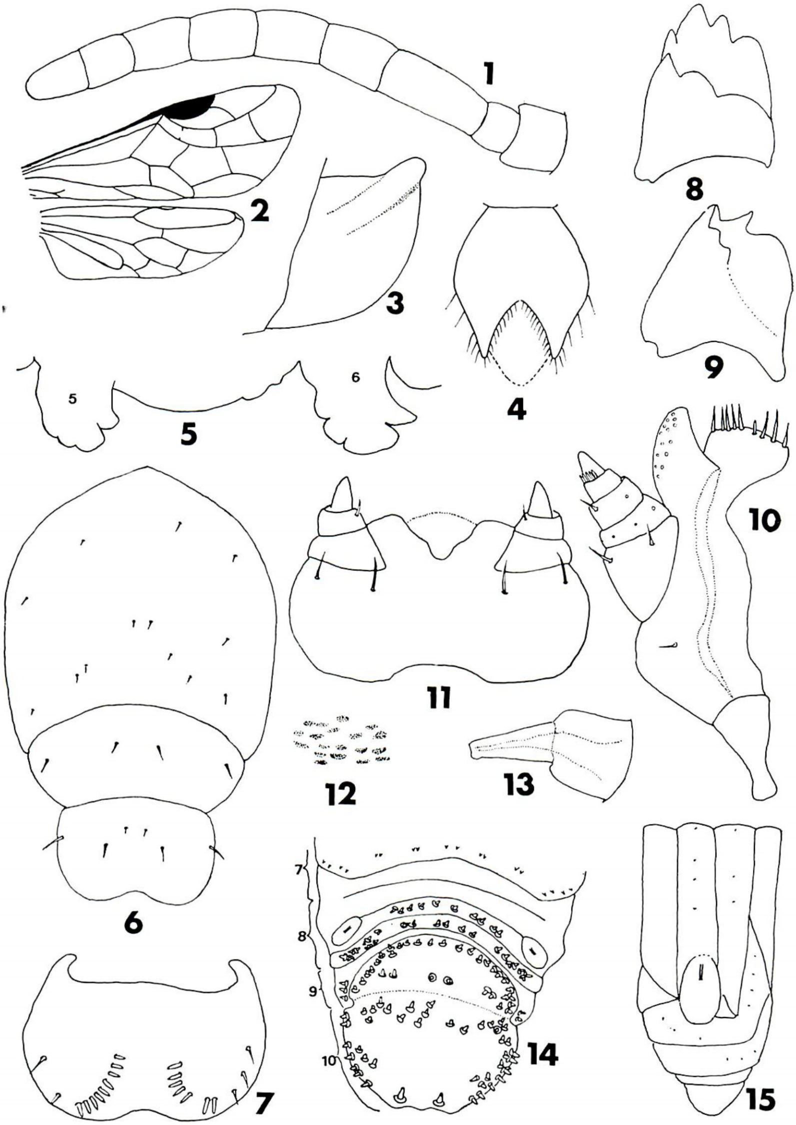
## Explanation of Plates 6–7.

Pl. 6. 1–15. *Monardis miyatai* n. sp. 1–5. Adult. 6–15. Larva.
1. Antenna; 2. Fore and hind wings; 3. Sawsheath, lateral view; 4. Ditto, dorsal view; 5. Sixth and 5th selullae from base; 6. Frons, clypeus and labrum; 7. Epipharynx; 8. Sinistral mandible; 9. Dextral mandible; 10. Dextral maxilla; 11. Labium; 12. A part of verrucose cuticle; 13. A wart of caudal plate; 14. Caudal end (7th–10th abdominal segments), dorsal view; 15. The 3rd abdominal segment, lateral view.
Pl. 7. Living *Monardis miyatai* n. sp.
1. Excreting larva, near ultimate (5th instar?); 2–3. Eggs on leaflets; 4. Female seeking for oviposition place; 5. Ultimate larva getting out of the eaten bud.
All of the plants are *Rosa hirtula*.

## 摘　要

1973年に，小田原市在住の宮田保氏からサンショウバラ（別名ハコネバラ）の蕾に穿孔し，落花の一原因となっているハバチの幼虫が送られてきた．幼虫の形態からマルハバチ亜科 Blennocampinae のもので，バラクキハバチ *Ardis brunniventris* に近縁のものとしか判らなかった．翌年同氏は飼育羽化した3♀♀を提供され，研究が開始された．ようやく，わが国未記録の属の未記載種であることがわかったので，***Monardis miyatai*** n. sp. ハコネバラハバチ（新称）として記載した．本種は図示したように，成虫・幼虫ともに特徴のはっきりした種であるので，同定は容易である．現在，宮田氏によって確かめられた分布域は，サンショウバラの分布とほぼ一致し，箱根を中心として，神奈川県西丹沢，静岡県富士南麓部，山梨県三ツ峠，御坂峠，山中湖および河口湖周辺である．本種の産地には他種のバラも多数散見されるが，食草となっていない．幼虫の習性からみて，恐らく他種のバラでは生活し得ないと思われる．サンショウバラの近縁種は中国大陸のイザヨイバラといわれるが，もし本種が他のバラで生活していれば，バラ属の近縁関係を推定する手がかりになりそうで，大変興味を引かれる．なお，筆者も，宮田氏の案内で，1975年5月29，30の両日にわたり現地で本種の生活の実態を観察し得た．

本種の発見によって，筆者が1972年に記載したマルハバチ亜科の属の検索にも追加を行った．



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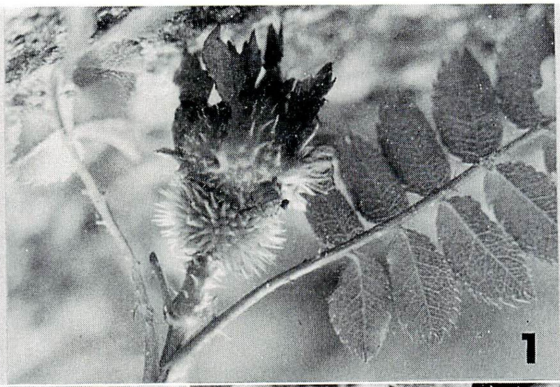

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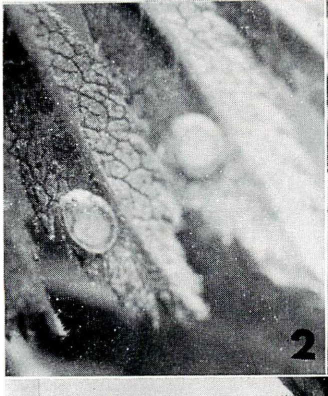

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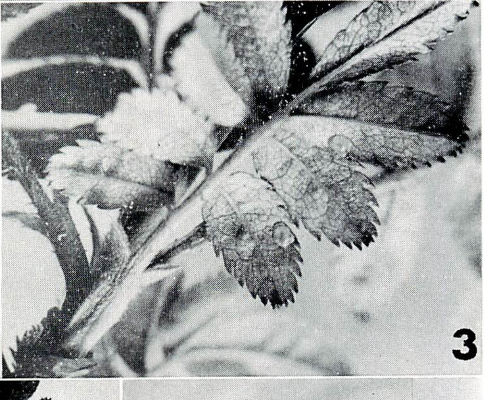

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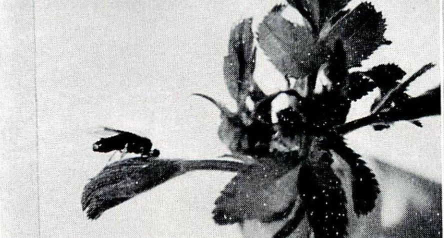

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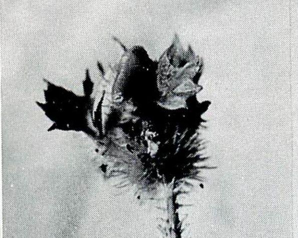

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(T. Miyata photo.)

# A New *Leucospis* Species from the Ryukyus, Japan (Hymenoptera, Leucospididae)

By Akinobu Habu

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The leucospidid fauna of Japan is scanty, hitherto only *Leucospis japonica* Walker and *L. sinensis* Walker (=*okinawensis* Matsumura, according to Bouček, 1974) having been known. Thanks to Mr. T. Nambu I examined one female specimen from Iriomote Is.; although it almost agrees with the descriptions of *L. bakeri* Crawford from the Philippines and *L. gonogastra* Masi from Formosa—both the species are identical, according to Bouček, 1974—except some characteristics, I regard the Japanese species as a different one, giving a name *nambui*. The new species is easily distinguishable from *L. japonica* and *L. sinensis* by the hind tibiae truncate at the apex instead of being more or less prolonged at the ventro-apical angle (cf. Habu, 1962).

Before describing the species, I wish to express my cordial gratitude to Mr. T. Nambu for his giving me an opportunity to examine the interesting material which is preserved in our Laboratory through his kindness.

## *Leucospis nambui* sp. nov.

"Hime-shiriage-kobachi"

*Description.* Female: Length 6.8 mm. Head black. Antennae (except scape) black, faintly brownish at apical area; scape light reddish brown. Thorax (Fig. 1) black; pronotum with two long transverse yellow band, anterior band somewhat dilated at median area and lateral areas, reaching lateral margins, posterior band a little tapering laterally, not reaching lateral margins, submarginal transverse carina and posterior marginal carina brownish; scapulae with rather short yellow band along outer margin; mesoscutellum (Fig. 4) with yellow large transverse patch, anterior margin of patch deeply emarginate at middle; median raised area of metanotum with small, brownish yellow, rather indistinct, transverse patch at middle; metapleura with one yellow oblique band; tegulae reddish brown. Wings brownish, fore wings somewhat dark at apical

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〔Ent. Rev. Japan, Vol. XXX, Nos. 1/2, pp. 47–51, Oct., 1977〕

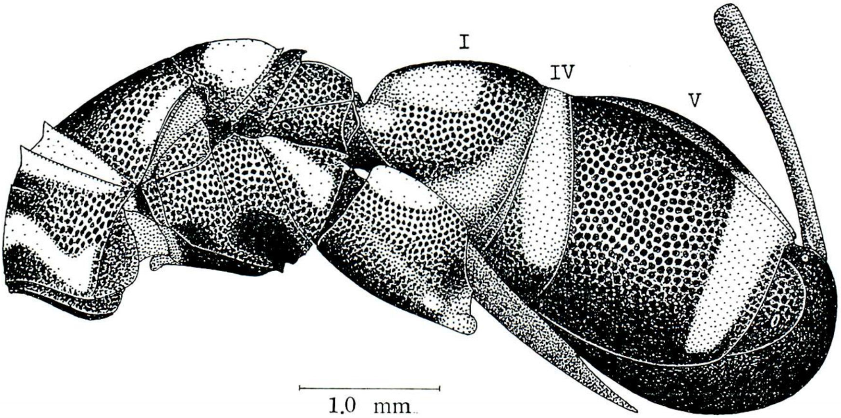
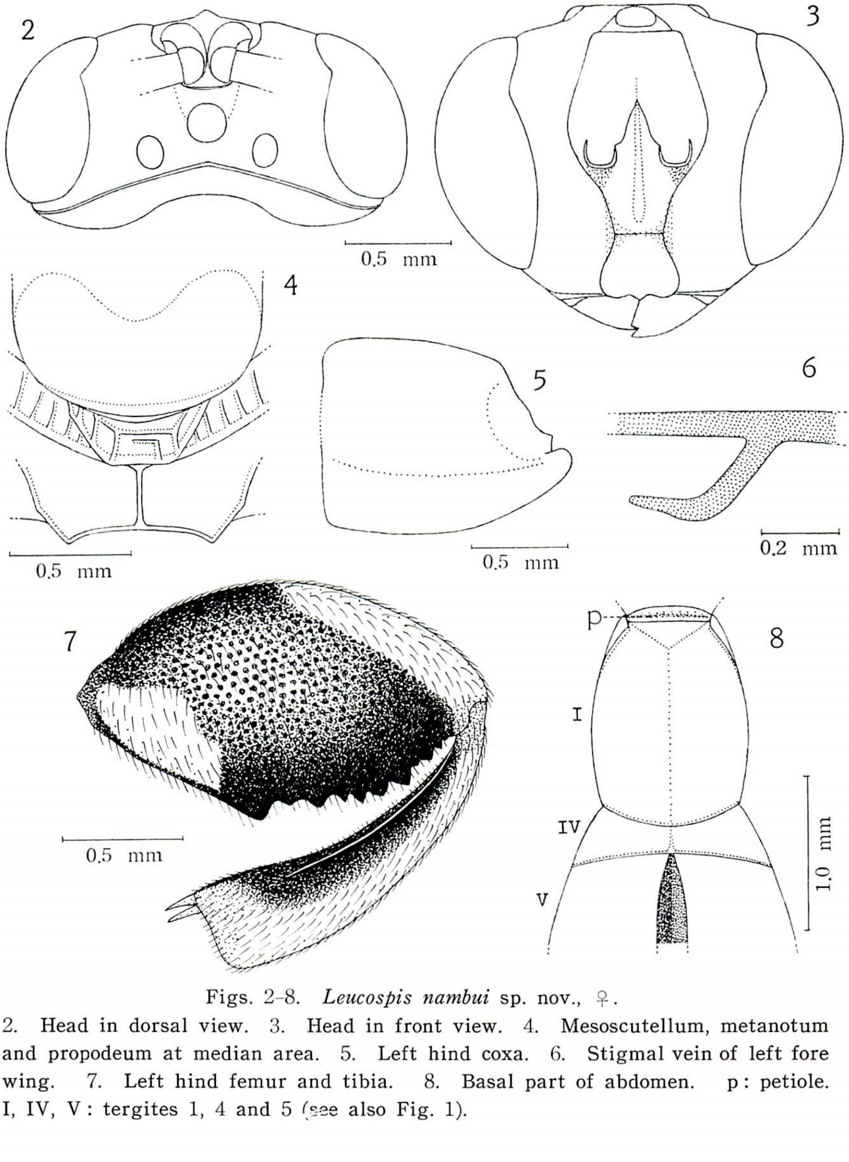


Fig. 1. Thorax with hind coxa and abdomen of *Leucospis nambui* sp. nov., ♀ in left lateral view (pubescence removed). I, IV, V : tergites 1, 4 and 5.

area ; veins brown or dark brown. Coxae black, hind coxae (Fig. 1) pale brownish at apical area, with yellow patch on dorsal area at basal half, small yellow spot before apical pale brownish area on ventro-lateral side ; femora black, fore femora yellow at apical two-fifths, mid femora pale brown at apical area, hind femora (Fig. 7) with two large yellow patch, basal patch along ventral margin, but not reaching outer ventral margin nor base, apical patch longer than basal patch, more than one-half as long as hind femur, on dorsal to dorso-outer side, a little extending onto dorso-inner side before apex, reaching apex of femora, inner side of hind femora brownish ; tibiae yellow, fore tibiae faintly brownish on inner side, with reddish black band on outer side, band well remote from base and dorsal margin, a little remote from apex, extending onto ventral side, mid tibiae somewhat brownish except at basal and apical areas, hind tibiae (Fig. 7) brownish at basal area, with black band, band widely distant from apex (area between apex of tibiae and apex of band faintly infuscate) and from dorsal side on outer side, almost reaching ventro-apical angle on ventral side, not black but dark reddish brown, a little wider but less distinct on inner side than on outer side ; tarsi pale yellow, somewhat reddish. Abdomen black ; tergite 1 brownish at basal area on dorsal side and postero-ventral area of lateral sides, with two large yellow patch on dorsal side, rather small brownish yellow patch at basal area on lateral sides, tergite 4 with transversely long orange-coloured band, band fairly distant from ventral margin, slightly separated from posterior (or apical) margin, tergite 5 with orange band almost similar to that of tergite 4 along posterior margin, band a little extending anteriorly on dorsal side, narrowly distant from ventral margin, rather narrowly but distinctly separated from posterior margin; hypopygium faintly brownish; ovipositor reddish black. Pubescence on body silvery white.



Figs. 2–8. *Leucospis nambui* sp. nov., ♀.

2. Head in dorsal view. 3. Head in front view. 4. Mesoscutellum, metanotum and propodeum at median area. 5. Left hind coxa. 6. Stigmal vein of left fore wing. 7. Left hind femur and tibia. 8. Basal part of abdomen. p: petiole. I, IV, V: tergites 1, 4 and 5 (see also Fig. 1).

Head in dorsal view (Fig. 2) compactly pitted except on area behind scrobe, a little wider than pronotum at posterior margin, one and nine-tenths times as wide as long (maximum length); occipital carina gently curved, extending onto tempora; width of ocellar area three-fifths as wide as inter-ocular space at level of hind ocelli, inter-ocellar space two and four-fifths times as wide as major axis of hind ocelli, one and three-fourths times as wide as space between each eye and hind ocellus. Head in front view (Fig. 3) compactly pitted on dorsal area of frons, rugosely carinate on other areas, one and three-sevenths times as wide as high (from top of ocelli to ventral margin of clypeus), pubescence dense; compound eyes well sinuate on inner margin, combined width of each eye a little narrower than inter-ocular space at level of ventral margin of scrobe cavity; height from ventral margin of front ocellus to ventral margin of clypeus five-eighths as high as head width; scrobe cavity two-thirds as wide as inter-ocular space at level of ventral margin of scrobe cavity; inter-antennal area fairly convex, with long carina somewhat dilated ventrally; clypeus wider than long, lobes smooth, rather indistinct, a little shorter than median tooth; malar space less than one-fifth as high as compound eye.

Antennae with segment 3 one and one-half times as long as pedicel, segment 4 as long as segment 3, as long as wide, segments 5 to 10 almost equal in length, slightly increasing in width, segment 10 one and one-third times as wide as long; club two and one-fifth times as long as segment 10.

Thorax compactly pitted on dorsal side, interspace of pits fine, carinate, without microsculpture; pronotum well convex, gently dilated posteriorly at lateral margins, with median carina short but distinct, submarginal and marginal carinae distinct, raised; mesoscutum medially as long as pronotum; mesoscutellum one and one-fourth times as wide as long, gently convex; median raised area of metanotum or dorsellum (Fig. 4) somewhat asymmetric, rather trapezoid, fully wider than long, glabrous, explanate at apical and lateral margins, with five longitudinal and two (one of them shorter) transverse irregular carinae, each interspace of carinae concave, apex truncate in dorsal view, emarginate in hind view; propodeum (Fig. 4) less than twice as long as dorsellum at middle, densely pitted, median carina and sublateral carinae distinct, posterior margin emarginate, forming distinct angle at termination of sublateral carina on either side.

Hind coxae (Fig. 5) more than one and one-fourth times as long as wide in lateral view, densely punctate, with narrow longitudinal area almost smooth or sparsely punctate at middle, dorsal edge not laminate nor dentate; hind femora (Fig. 7) less than twice as long as wide except ventral teeth, outer side densely, distinctly punctate, not reticulate, outer ventral margin with ten or eleven, not slender, irregular teeth; fore tibiae rather carinate on dorsal side; hind tibiae (Fig. 7) almost truncate at apex, ventro-apical angle not protrudent, outer spur developed, fully more than twice as long as wide at base, inner spur a little longer but a little narrower than outer spur.

Stigmal vein (Fig. 6) of fore wings not bifurcate at apex, viz. terminal processus absent.

Petiole (Fig. 8) short but well visible, transversely, deeply sulcate. Gaster in dorsal view widest at five-eighths, a little narrower than pronotum, one and three-sevenths times as long as wide; tergite 1 (Fig. 8) one and two-sevenths times as long as wide, smooth and glabrous at basal one-sixth, otherwise densely punctate like other tergites, median carina faint; tergite 4 obscurely carinate at middle; tergite 5 (Fig. 8) with ovipositor groove deep, wider than ovipositor, distinctly reaching posterior margin of tergite 4; epipygium reaching posterior margin of tergite 5; ovipositor probably not reaching base of tergite 5, fairly longer than hind tibia. Gaster in lateral view (Fig. 1) with dorsal line gently rounded, tergite 3 narrowly visible at ventral half.

Male and host: Unknown.

*Distribution.* Japan: Ryukyus.

*Type-specimen.* Holotype: ♀, VIII. 11, 1972, Komi, Iriomote Is., T. NAMBU leg.

*Remarks.* This new species may be closely allied to *L. bakeri* CRAWFORD, but mainly differs in the length of the ovipositor groove on the fifth tergite: the groove so completely runs from base to apex of the fifth tergite, that there remains no ungrooved space at the basal area, while on the fifth tergite of *L. bakeri* "the apical two-thirds.... deeply furrowed" and "basad of the furrow for the ovipositor with a median longitudinal carina" (after CRAWFORD, 1914) or "terebrae sulco marginem anteriorem non attingente" (after MASI, 1932), and correspondingly the ovipositor is longer, more than one and one-third times as long as a hind tibia exclusive of the apical spurs, whereas it is "hardly longer than hind tibia" in *L. bakeri* (after BOUČEK, 1974). In addition the metanotum has not a central patch; the posterior orange-coloured band of the fifth tergite is shorter or longitudinally narrower—in *L. bakeri* "third segment (=tergite 5) near middle with a yellow band which laterally widens posteriorly and reaches the apical margin of segment" (after CRAWFORD, 1914).

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# マルガタゴミムシとニセマルガタゴミムシ（新称）の相異点について

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# Discriminating Characteristics between *Amara* (*Amara*) *chalcites* Dejean and *A.* (*A.*) *congrua* Morawitz (Coleoptera, Carabidae)

By Akinobu Habu

マルガタゴミムシはわが国各地で普通に見られるゴミムシであって，*Amara* (*Amara*) *chalcites* Dejean の学名でよく知られている．Hieke は世界のマルガタゴミムシ族の再調査をしているが，マルガタゴミムシとして扱われているものには *chalcites* のほかに，もう1種別の種が混在していることを1973年に指摘して，長い間 *chalcites* のシノニムとされていた *congrua* Morawitz を独立種と見なした．主要な区別点は♂♀の交尾器にあるので，手もとのいわゆるマルガタゴミムシの標本の中から♂77頭，♀105頭の標本について，交尾器を取り出して検鏡した．以下この2種の区別点について述べてみたい．

本文に先立って，四国の標本をご恵送いただいた佐藤正昭氏，そのほか標本をご寄贈下さった多くの方々に心からお礼を申し上げる．

## 種の区別点

大きさおよび色：概して *congrua* のほうが *chalcites* より小さい1)．体長は前者が 7.4–9.4 mm，後者が 8.0–9.7 mm，体幅は 3.4–4.2 mm および 3.7–4.4 mm である．背面は暗銅色であるが，*congrua* では時として青色または緑青色の金属光沢の強い個体が見られる．

翅鞘間室：Hieke によれば，間室は先端近くで *congrua* では平らであるが，*chalcites* では隆起するとのことである．しかし *congrua* で隆起したものも，また *chalcites* で平らなものも見られ，この特徴は区別点としては役に立たない．

前胸背板の比率：両種とも♂5頭，♀5頭を選んで測定した結果では，*congrua* のほうが前胸背板が幅に比べて多少長いという結果が出た以外は，数値に差はない．以下比率を示す

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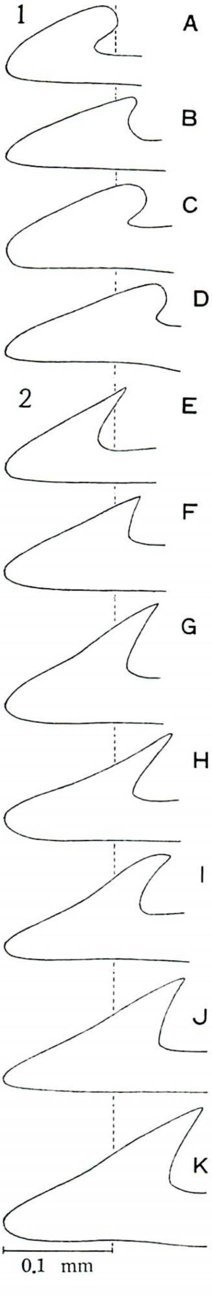
1) 浦和産の1♀で，体長 10.1 mm，体幅 4.7 mm ときわめて大形のものがあり，一見 *chalcites* のようであるが，尾状突起先端節（第6図E）の長さは 0.36 mm と短い．もし *chalcites* ならば優に 0.5 mm を越えているであろう．この標本の前胸幅／前胸長は1.58．

〔昆虫学評論，第30巻，第1/2号，53-59頁，1977年，10月〕

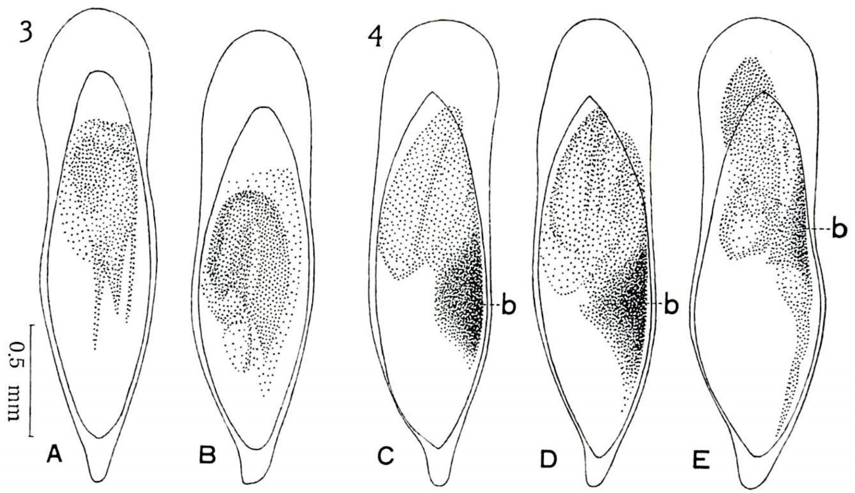


と，前胸幅／頭幅 1.94–2.07，平均 2.01（*congrua*），1.94–2.08，平均 2.00（*chalcites*），前胸幅／前胸前縁幅 1.70–1.82，平均 1.76（*congrua*），1.68–1.84，平均 1.77（*chalcites*），翅鞘幅／前胸幅 1.10–1.17，平均 1.12（*congrua*），1.12–1.18，平均1.15（*chalcites*）．♂10頭，♀10頭の測定による前胸幅／前胸長は 1.55–1.65，平均 1.60（*congrua*），1.60–1.72，平均 1.66（*chalcites*）．

♂交尾器右側片：マルガタゴミムシ族では右側片は細長く伸長し，先端には背面にかぎ状の突起がある．Hieke はかぎ状の部分の短いものを *congrua*，長いものを *chalcites* としたが，第２図に示したように，長さは種の特徴とはならない．かぎ状部は，*chalcites* においては左右から圧扁されているため，背面から見ると薄く，突起の先端はどの方向から見ても常に鋭くとがっている（第２図）．これに反して，*congrua* では側背面から圧扁されているため，背面から見ると厚みがあり，突起の先端は角度によってはとがって見えることがあるが，第１図のように丸くなっている．Hieke の論文では *congrua* の４個体のこの部分が図示されているが，いずれも突起の先端は *chalcites* のようにとがらして描いている．今回調べた43頭の♂（２頭の不確実なものを含めて）のうち，新潟県黒川産（第５図）と京都府貴船産の２頭のみ *chalcites* のようにはっきりととがっていた．この個体については中間型の項で述べる．第１図のAとBはやゝ未成熟な個体から描いたので，♀の交尾器とは違って，丸くなったかぎ状部は古い個体の変形したものではない．

陰茎の内部構造：陰茎を背面または右側面から見ると，右側面に沿ってかなり大きな黒色の部分が中央近くに見える（第４図のｂ）のは，*chalcites* である．この黒色の部分ははっきりしているので，交尾器を苛性カリで煮て，グリセリンに漬けなくても，通例はよく見えるが，強くキチン化した個体では見にくいことがあり，また時として第４図Ｅのように内部の膜質部

第１，２図．♂交尾器右側片の先端部．
（Apical part of right paramere of male genitalia）．
1. ***Amara*** **(*Amara*)** ***congrua*** Morawitz. A. Mt. Hiko, Fukuoka Pref. B. Hikimi, Shimane Pref. C. Mt. Hiko, Fukuoka Pref. (aedeagus in Fig. 3-A). D. Tanoura, Moji-ku, Kitakyûshû, Fukuoka Pref. (aedeagus in Fig. 3-B). 2. ***A.*** **(*A.*)** ***chalcites*** Dejean. E. Memuro, Hokkaido (aedeagus in Fig. 4-D). F. Hachijô Is., Tokyo M.D. G. Warabi, Saitama Pref. (aedeagus in Fig. 4-C). H. Mt. Moiwa, Sapporo, Hokkaido. I. Kotoni, Sapporo, Hokkaido. J. Mt. Takenoko, Niigata Pref. (aedeagus in Fig. 4-E). K. Obihiro, Hokkaido.



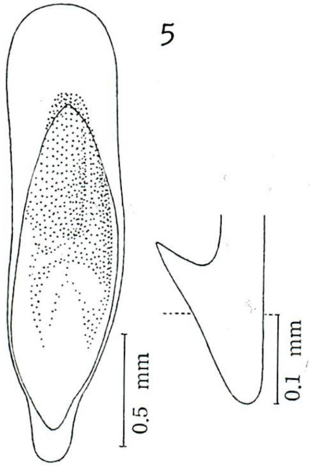
第3，4図．陰茎背面図（Aedeagi in dorsal view).
3. ***Amara* (*Amara*) *congrua*** Morawitz. A. Mt. Hiko, Fukuoka Pref. B. Tanoura, Moji-ku, Kitakyûshû, Fukuoka Pref. 4. ***A.* (*A.*) *chalcites*** Dejean. b : black part of inner sack. C. Warabi, Saitama Pref. D. Memuro, Hokkaido. E. Mt. Takenoko, Niigata Pref.

が全体基部に引込まれていて，見にくいことがある．陰茎が未成熟の場合はこの黒色部も不明りょうなことが多く，同定は右側片のみに頼らなければならないので，場合によっては，*congrua* が混同されるおそれはある．一方 *congrua* では，第3，5図のようにこの黒色部分は存在しない．Hieke は1975年の論文に，両種の陰茎の背面図を各3頭ずつ載せているが，*chalcites* の図にはこの黒色部がはっきり示されていない．

♀交尾器尾状突起の先端節：多数の個体を測定すると，先端節は第6，7図のように，短いものから長いものへと連続する．しかし明らかに二つの曲線が描かれ，一つは最頻値が0.28 mm 内外，他は0.44 mm 内外で，2種であることを示している．ここでは *congrua* では長さ0.25–0.36 mm，*chalcites* では0.38–0.49 mm と定義しておく．

## 中間型

まれにはっきりとは同定できない場合がある．前述の2頭の♂が右側片先端部に *chalcites* の特徴を示しているが，陰茎には *congrua* のように内部に黒色部がない（第5図）．この二つの特徴からではどちらとも決められないが，大きさや色から判断して，疑問符を付けて *congrua* と同定した．この2頭の標本の前胸幅／前胸長は1.55（貴船産)，1.64（黒川産）である．この逆の場合，すなわち陰茎内部に黒色部があって，右側片のかぎ状部が丸くなった個体は，見られなかった．



第5図．新潟県黒川産ニセマルガタゴミムシ？の陰茎背面図と右側片先端部（マルガタゴミムシ型）．
(Aedeagus of ? *Amara* (*Amara*) *congrua* MORAWITZ from Kurokawa, Niigata Pref., with acutely hooked apical part of right paramere).

## 分　布

両種とも日本に広く分布している．調べた範囲では *chalcites* は北海道で明らかに優勢で，調査した17頭には *congrua* は全く含まれていなかった．しかし *congrua* の模式産地は函館である．本州・四国・九州では，*congrua* のほうが概して優勢であるが，神奈川県大磯海岸で採集された標本から任意に14頭を選んで交尾器を検したところ，12頭は *chalcites* であった．徳島県剣山産10頭を調べたが，1頭だけ *chalcites* が混ざっていたが，香川県高松市産の12頭は，*chalcites* 7頭，*congrua* 5頭であった．少数の標本ではあるが，東京都三宅島，長崎県壱岐および対馬では，両種とも見られた．

現在のところでは2種の分布の相違をはっきりとはつかむことはできなかったが，さらに調査をすれば，地方地方によって分布の相異があるかも知れない．日本以外では材料が乏しいので，ここでは触れない．

## 交尾器を調べた標本の産地

*Amara congrua* MORAWITZ. HONSHU: Aomori Pref.—1♂, Tappi (K. BABA leg.), 1♀, Nurukawa, Hiraka (N. FUKUHARA), 1♂, Araya (A. SATÔ, through K. SHIMOYAMA); Yamagata Pref.—1♀, Sakata (K. SHIRAHATA); Fukushima Pref.—1♀, Shirakawa (K. BABA); Tochigi Pref.—1♂, Mine, Utsunomiya (M. INAIZUMI), 1♀, Nikkô (H. YUASA); Gumma Pref.—1♂, Katashina (A. HABU); Saitama Pref.—1♀, Agano (A. HABU), 1♀, Kasaibashi (H. KAJIMURA), 1♂, 1♀, Urawa (H. KAJIMURA), 1♀, Warabi (A. HABU); Tokyo Metropolitan District—1♂, 2♀♀, Nishigahara, Kita-ku (N. NAKASONO), 2♀♀, *do.* (A. HABU), 1♂, 1♀, Ochiai, Shinjuku-ku (A. HABU), 1♀, Ôimachi, Shinagawa-ku (T. FUJIMURA), 1♀, Kinuta, Setagaya-ku (T. FUJIMURA), 1♀, Asakawa, Hachiôji (C. HIRANO), 1♀, Mt. Takao (T. FUJIMURA), 2♂♂, Hachijô Is. (K. BABA); Kanagawa Pref.—2♀♀, Ôiso (H. HASEGAWA); Niigata Pref.—1♂, 1♀, Kurokawa (A. HABU), 1♀, Sasaguchihama (K. BABA), 1♀, Kamiishikawa (K. Baba); Nagano Pref.—1♂, Mt. Kirigamine (S. IMAFUKU); Ishikawa Pref.—2♂♂, Awagasaki (K. SADANAGA); Mie Pref.—1♂, 1♀, Hirakura, Misugi (M. GOTÔ, through I. HIURA); Kyôto Pref.—1♀, Kibune (T. SHIBATA, through I. HIURA); Osaka Pref.—1♂, 3♀♀, Mt. Kongô (I. HIURA), 1♂, 3♀♀, Asuka, Habikino (I. HIURA), 1♀, Shindo, Tondabayashi (T. FUJIMURA); Wakayama Pref.—1♀, Mt. Nachi (T. FUJIMURA); Shimane Pref.—1♂, Hikimi (T. FUJIMURA), 1♂, Oki Is. (S. OHTA, through T. FUJIMURA); Hiroshima Pref.—1♂, 1♀, Takano (S. NAKAMURA), 1♂, Hiwa (S. NAKAMURA), 1♂, Shôbara (S. NAKAMURA). SHIKOKU: Kagawa Pref.—4♂♂, Mitanichô, Takamatsu (H. UEHARA, through M. SATOU), 1♀, Mt. Shiun, Takamatsu (M. SATOU), 1♂, Ayagami (M. SATOU), 1♀, Mt. Ôtaki (M. SATOU), 1♀, Mt. Daisen, Nakatado-gun (M. Satou); Tokushima Pref.—3♀♀, Naruto (K. Wada, through M. Satou), 1♂, Mt. Tsurugi (M. Chûjô), 1♂, 1♀, *do.* (Minokoshi-summit) (I. Hiura), 2♂♂, 2♀♀, *do.* (Meotoike, at alt. 1500 m) (M. Satou), 2♀♀, *do.* (*do.*) (K. Wada, through M. Satou); Kôchi Pref.—1♀, Kuroson (M. Chûjô). Kyushu: Fukuoka Pref.—3♂♂, 3♀♀, Tanoura, Moji-ku, Kitakyûshû (A. Habu), 1♂, Mt. Adachi (Y. Izumo), 3♂♂, 5♀♀, Mt. Hiko (A. Habu), 1♀, *do.* (K. Morimoto), 1♀, Maebaru (A. Habu); Nagasaki Pref.—1♂, 1♀, Yunomoto, Iki Is. (K. Baba), 1♂, 2♀♀, Sumo, Tsushima Is. (K. Baba); Miyazaki Pref.—1♂, 2♀♀, Shiiba (A. Habu); Kagoshima Pref.—1♂, 1♀, Iwakawa. Satsunans: 1♀, Nakanoshima Is. (J. Emoto).

? *Amara congrua* Morawitz. Honshu: Niigata Pref.—1♂, Kurokawa (K. Baba); Kyôto Pref.—1♂, Kibune (M. Kawakatsu).

*Amara chalcites* Dejean. Hokkaido: 1♀, Pinka, Teshio (T. Shirôzu), 3♀♀, Shumarinai (J. Mitsuhashi), 1♀, Yagishiri (H. Inouye), 1♂, 2♀♀, Obihiro (H. Inouye), 2♂♂, Memuro (T. Fujimura), 1♀, Sapporo (H. Hasegawa), 1♀, Maruyama, Sapporo (Y. Nishio), 1♂, 1♀, Kotoni, Sapporo (Y. Nishio), 1♂, 1♀, Mt. Moiwa, Sapporo (Y. Nishio), 1♀, Jôzankei, Sapporo (K. Baba). Honshu: Aomori Pref.—1♀, Kizukuri (K. Shirahata), 2♂♂, Okonogi, Kuroishi (A. Satô, through K. Shimoyama), 2♀♀, Nurukawa, Hiraka (A. Habu); Tochigi Pref.—1♂, Yumoto, Nikkô (K. Baba), 1♀, Chûzenji, Nikkô (K. Kimura); Gumma Pref.—1♂, Yamanohana, Oze (I. Hiura); Chiba Pref.—1♂, Noda (A. Habu); Saitama Pref.—1♀, Kasaibashi (H. Kajimura), 3♂♂, Warabi (A. Habu); Tokyo Metropolitan District—1♂, Suginami-ku (N. Fukuhara), 1♀, Marukotamagawa, Ôta-ku (T. Fujimura), 1♀, Fuchû (T. Fujimura), 1♀, Nippara, Okutama (T. Fujimura), 1♂, Hachijô Is. (K. Baba), 1♂, 1♀, *do.* (Y. Ôshima); Kanagawa Pref.—5♂♂, 7♀♀, Ôiso (H. Hasegawa); Niigata Pref.—3♂♂, 2♀♀, Mt. Takenoko (at alt. 1600-1700 m) (K. Baba); Nagano Pref.—1♂, 1♀, Azusayama (T. Yamaguchi), 1♀, Mt. Kirigamine (S. Imafuku); Shimane Pref.—1♂, 4♀♀, Enya, Izumo (T. Fujimura). Shikoku: Kagawa Pref.—2♀♀, Mitanichô, Takamatsu (H. Uehara, through M. Satou), 1♀, Kasugachô and 2♂♂, 2♀♀, Matsushimachô, Takamatsu (M. Satou), 1♂, Ayagami (M. Satou), 1♂, Mt. Ôtaki (M. Chûjô); Tokushima Pref.—1♀, Mt. Tsurugi (Minokoshi-summit) (I. Hiura). Kyushu: Ôita Pref.—1♀, Minamiôita, Ôita (A. Habu); Nagasaki Pref.—1♂, Yunomoto, Iki Is. (K. Baba), 1♂, Uchiyama, Tsushima Is. (K. Baba); Kagoshima Pref.—1♂, Yamakawa (H. Hasegawa), 1♂, Iwakawa.

合計 *congrua* 105頭（本州産 56，四国産 21，九州産 27，薩南諸島産 1），*chalcites* 77頭（北海道産 17，本州産 45，四国産 10，九州産 5）．

## 2種の検索表

A．♂交尾器右側片の先端部は側背面からやや圧扁され，背面から見ると少し厚く，かぎ状突起の先端は丸みをおびる（第1図）；陰茎内部には黒色の部分はない（第3図）；♀交尾器尾状突起の先端節は短く，長さは 0.25-0.36 mm（第6図）；前胸幅／前胸長 1.55-1.65；体の背面は暗銅色であるが，時として青色または緑青色の金属光沢がある…………………………………………………………………………………ニセマルガタゴミムシ *A. congrua*

B．♂交尾器右側片の先端部は左右から圧扁されているので，背面から見ると薄く，かぎ状部の先端は常に鋭くとがる（第2図）；陰茎内部には右側面近くに黒色の強くキチン化し

た部分がある（第4図b）；♀交尾器尾状突起の先端節は長く，長さは 0.38–0.49 mm（第7図）；前胸幅／前胸長1.60–1.72；体の表面は暗銅色……………………………………………………マルガタゴミムシ *A. chalcites*

## 引用文献

Hieke, F., 1973: Beitrag zur Synonymie der paläarktischen *Amara*-Arten (Coleoptera, Carabidae). Deutsche Ent. Zeitschr., N. F. 20: 23–29.

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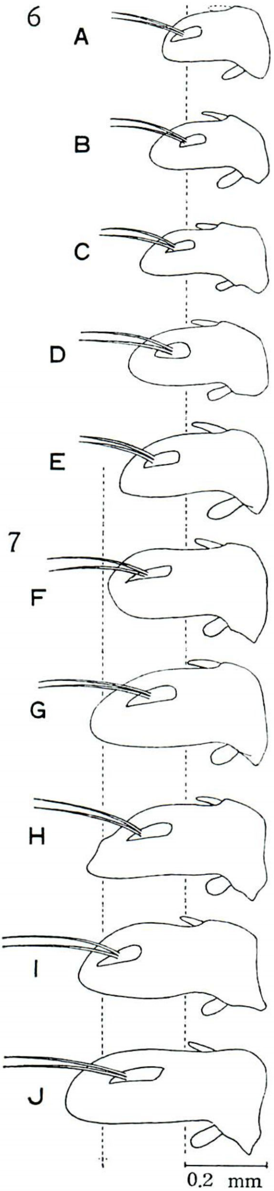
## Summary

I examined the genitalia in seventy-seven male and one hundred and five female specimens of the so-called *Amara* (*Amara*) *chalcites* from Japan with a view to evince the distinguishing characteristics between *A. chalcites* Dejean and *A. congrua* Morawitz (cf. Hieke, 1973, 1975).

The aedeagus contains a black portion near the right lateral side in *chalcites* (Fig. 4, b), but without it in *congrua* (Fig. 3). The apical part of the right paramere is compressed and thin in a dorsal view, with the hook always acute at the apex in *chalcites* (Fig. 2), while it is somewhat depressed and rather thick in a dorsal view, with the hook rounded at the apex in *congrua* (Fig. 1). I examined two male specimens (width of pronotum/length of pronotum 1.55, 1.64) with the aedeagus without a black portion inside like in *congrua*, the right paramere, however, is with the hook acute at the apex like in *chalcites* (Fig. 5); I identified them with some doubt as *congrua*. The length of the hooked part is of no specific value.



第6，7図．♀交尾器左尾状突起先端節．

(Apical segments of left stylus of female genitalia).

6. ***Amara*** (***Amara***) ***congrua*** Morawitz. A. Tsushima Is., Nagasaki Pref. B. Kurokawa, Niigata Pref. C. Kibune, Kyôto Pref. D. Asuka, Habikino, Osaka Pref. E. Urawa, Saitama Pref. 7. ***A.*** (***A.***) ***chalcites*** Dejean. F. Jôzankei, Sapporo, Hokkaido. G. Ôiso, Kanagawa Pref. H. Enya, Izumo, Shimane Pref. I. Shumarinai. Hokkaido. J. Ôiso, Kanagawa Pref.

The apical segment of the styluses is shorter, 0.25–0.36 mm in length in *congrua* (Fig. 6), longer, 0.38–0.49 mm in *chalcites* (Fig. 7).

The elytral intervals convex or flat near the apex are of no specific value. The dorsal side is dark coppery, but sometimes metallic blue or greenish blue in *congrua*. *A. congrua* is smaller, 7.4–9.4 mm in length, 3.4–4.2 mm in width, while *chalcites* is larger, 8.0–9.7 mm and 3.7–4.4 mm, but I examined a fully large female specimen of *congrua*, 10.1 mm in length, 4.7 mm in width, width of pronotum/length of prontum 1.58, with the apical segment of the styluses 0.36 mm in length (Fig. 6E). The pronotum is a little longer in *congrua* than in *chalcites* : width/length 1.55–1.65, mean 1.60, in *congrua*, 1.60–1.72, mean 1.66, in *chalcites*, in ten ♂♂ and ten ♀♀.

*A. chalcites* is obviously predominant in Hokkaido, while *congrua* is rather dominant in Honshu, Shikoku and Kyushu so far as I have examined.

# ヤマトヒメハナカミキリについて

山　脇　好　之

# Study on *Pidonia yamato* HAYASHI et MIZUNO from Kyushu, Japan, with Description of a New Subspecies. (Cerambycidae)

by YOSHIYUKI YAMAWAKI

林匡夫博士は *Pidonia yamato* の記載（1953）にあたって，春日山・大杉谷の本州産のものと，旭丸山・ふくみがわの四国産のものとを取扱った．松田，天野両氏は福岡県福智山（1956）から記録して，九州を産地に追加した．九州からはその後，福岡県英彦山・深倉峡，大分県九重山，熊本県国見岳，宮崎県大崩山から報告されたが，私も九州の中央部にあたる宮崎県の白岩山およびその周辺の山地で，コハウチワカエデ・ガクウツギ・ニシキウツギなどの花から12頭の本種を採集することができた．これ等の標本をもとにして，英彦山で採集した１♂と，天野氏から送られた深倉の１♂，１♀および足立氏から貸与した同じく深倉の２♀♀とを併せて研究することができたので，その結果を以下に纒めることにした．

九州産のヤマトヒメハナカミキリは本州・四国産のものと非常に似てはいるが，いくつかの点で異るところがあるので，九州産の本種は，本州や四国に産する個体群とは別に，九州からだけに現われる個体群と考えた方がよいと思われる．

雄では本州産のものとほとんど変るところは認められないが，強いていえば，会合線上の縦の黒条は上翅の中央より前方で，両側から急に衰えていて，まるまって出発している．これは両側の方が巾広く出発するか，または枝状に肩部内方に向う黒条になる本州・四国型とは幾らか違っているし，中央側紋は常にやや小さく前方側紋とほとんど同じ大きさである．

雌では本州産のものと差が表われるようで，上翅は一般に黒い部分が発達していて，上翅中央部の黒い円形の紋を囲む黄褐色の部分は前後に二分され，基部に近い紋は会合線に沿ってL型になる（左翅はその逆になる）．この黄褐色の部分は，個体により大小があって一定していないが，大別して前記のかたちを形造っている．また，触角第９節の3/5から第11節のほぼ1/2までが灰白色で，生時は鮮明な白い微毛で被われている．

以上の点から考えて九州型の本種は本州型の原種と区別した方がよいと考えられる．

## *Pidonia yamato* HAYASHI et MIZUNO subsp. *higeshiro* subsp. nov.

This new subspecies closely resembles to the original subspecies, but it fairly

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〔昆虫学評論，第30巻，第1/2号，61-62頁，1977年，10月〕

differs from the latter with the following points:—

In the male, sutural vitta of the elytral black markings starting at a little distance behind scutellum has never a pair of small oblique branches, not spreads out immediately at the beginning, but starts so gradually round. Size of latero-median marking of which in this subspecies is usually smaller than that of the original subspecies and almost the same as that of latero-basal marking thereof.

In the female, the black markings on elytra generally are more developed than in the original subspecies. Shape of brownish fulvous portions located at the front of latero-median black markings is shown as a pair of capital L characters opposed each other. Antennal joints (excepting the dark blackish brown first) are black, but apical three-fifths of 9th, 10th and nearly basal half of 11th are replaced by pale grey.

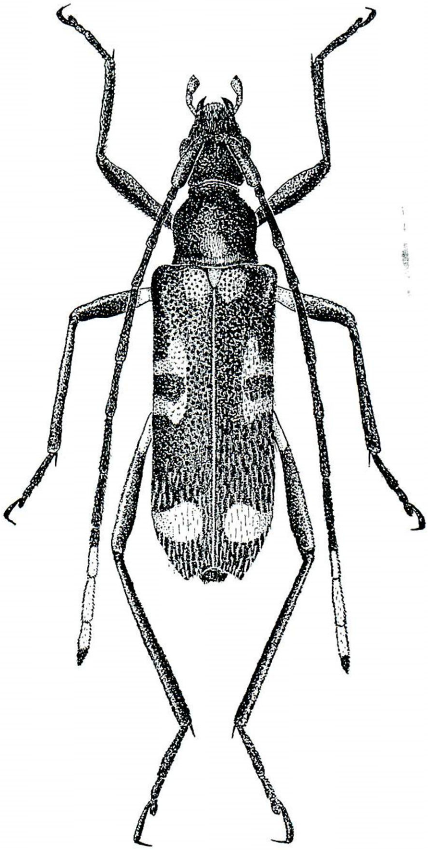
Body length, 7.3–11 mm., width, 1.8–2.9 mm.

Holotype, ♂, Mt. Shiraiwa, Miyazaki Pref., May 2, 1966, Y. YAMAWAKI leg. Paratypes, 1♀, the same data as holotype; 1♂, June 23, 1965, 1♂, June 14, 1973, 2♂♂, 4♀♀, May 28 & 29, 1974, same as holotype; 1♂, Pass Kunimi, near Mt. Shiraiwa, Miyazaki Pref., May 29, 1972, Y. YAMAWAKI leg.; 1♂, Motoyashiki, Miyazaki Pref., May 27, 1972, Y. YAMAWAKI leg.; 1♂, Fukakura, Fukuoka Pref., May 9, 1970, 1♀, ditto, June 29, 1964, M. AMANO leg.; 1♀, ditto, May 5, 1974, 1♀, ditto, June 4, 1972, K. ADACHI leg.; 1♂, Mt. Hiko, Fukuoka Pref., June 17, 1959, Y. YAMAWAKI leg.

Distribution: Kyushu, Japan.

Remarks: In Mt. Shiraiwa, this subspecies is found flowering on *Acer Sieboldianum* MIQ., *Hydrangea scandens* SERINGE and *Weigela decora* NAKAI at altitudes from 900 to 1300 m.

この報文を書くにあたり，林匡夫博士にご指導ならびに幾度かの励ましをいただいた．また，北九州市の天野昌次，足立一夫両氏から標本の援助をいただき，大阪の田村保氏からは助言をいただいたことを特に記して末尾とする．



*Pidonia yamato higeshiro* subsp. nov., ♀

# ケブカマルクビカミキリの生態について

黒　田　祐　一

# Ecological Notes on *Atimia okayamensis* HAYASHI (Cerambycidae, Col.)

By YÛICHI KURODA

*Atimia okayamensis* HAYASHI ケブカマルクビカミキリは1972年林匡夫博士6)により *Atimia fujimurai* とともに新種として発表されたもので，わが国においては初めて分布が確認された *Atimia* HALDEMAN ケブカマルクビカミキリ属に含まれるものである．本属は Aseminae マルクビカミキリ亜科に属し，現在までに主として北米・その他メキシコ・ソ連（沿海州）・中国・日本・台湾に分布する11種2亜種が知られている．本属の生態については *A. confusa* (SAY)3)および *A. nadezhdae* TSHEREPANOV 2)の報告はあるが，本種については筆者による簡単な報告15)のみで未だ解明されていない．筆者は本種の飼育および野外における観察により新知見を得たのでここに報告する．

この報文作成に当り終始ご鞭撻とご指導をいただいた林匡夫博士，日頃から文献のお世話になっている小島圭三博士，中根猛彦博士，渡辺弘之博士，中村慎吾氏，郷遠氏，青野孝昭氏，質問にお答えいただいた草間慶一博士，資料蒐集にご協力いただいた小野豊氏および倉敷昆虫同好会々員各位に謝表を表する．

## 食樹，成虫の分布および出現時期

本種成虫がネズミサシ（ネズ，ムロ）*Juniperus rigida* SIEB. et ZUCC.（ひのき科）と密接な関係にあることは既にその叩網で得たという報告15)によっても明らかになったが，更に飼育観察により成虫・幼虫ともに該植物を加害することが確認された．

本種の分布については岡山県1)，長野県8),20)が知られている．岡山県では県南部に分布するが，その後青野孝昭・宇野弘之氏（私信）は備前市寺山で1974年10月20日に4頭，倉敷市由加山で1975年11月2日に2頭を採集しており，分布範囲は東は兵庫県に接し，南は瀬戸内海近くまで拡大された．長野県では3ケ所で採集されている．何れにしても，食樹の分布9)が広範なことからして生息範囲は今後更に広がるものと思われる．

成虫の野外で見られる時期は，岡山県においては当時の知見15)では4月1日から5月15

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〔昆虫学評論，第30巻，第1/2号，63-71頁，第8図版，1977年，10月〕

日であったが，その後岡山市高松町で1975年３月30日に２頭（♀♀）を採集，また山地・分島22)は1974年９月26日～11月７日同所における多数採集例を報告し，脇本浩氏（私信）は1974年12月１日都窪郡三因で４頭採集しており，３月下旬から５月中旬までと９月下旬から12月初旬までの２期において認められるに至った．飼育観察によると９月５日に羽化例があり，秋期における出現時期はもっと早いかもしれない．長野県における１例は６月２日に採集されていて，生息地域による環境の差異が見られる．ちなみに北緯45°を中心に沿海州に生息する *A. nadezhdae* Tsherepanov は７月下旬から８月にかけて現われ，成虫体にて越冬し翌春に出現し，また北緯40°を中心に北米東部に生息する *A. confusa* (Say) は晩夏に現われ，成虫または幼虫体にて越冬し翌早春に出てくるそうである．即ち，本種も秋期に羽化脱出し，他種同様越冬し翌春出現するものと思われる．

## 後食および成虫生存期間（第８図版，第１，２図）

Aseminae マルクビカミキリ亜科の後食については，Asemini 族の *Arhopalus rustisus* (Linné) サビカミキリがアカマツ１年枝の外皮やヤニを，*Asemum striatum* (Linné) オオマルクビカミキリがカラマツ材のヤニを後食することが報告20)されているが，Atimiini 族の後食については未だ知られていない．

筆者は成虫が前述のように，その小さい体に似あわず数ケ月間生存すること，成虫をネズの小枝とともに飼育箱に入れておくと箱底に暗緑色の糞を認めることから後食を確信し，観察を続けていたところ1976年５月12日に後食中を目撃することができた．その状態は，ネズの葉に頭部を葉軸方向に向けてとまり，前肢で葉をかかえ込み，後肢を突張ってできるだけ尾端を葉から横につき出し，葉の上面の凹んだ部分を横向きで噛っており，その食痕をみると葉軸より１mmの所から葉端に向け約２mmほど線状に欠損しており，深く噛った時は写真のように薄くすけて見えるが，浅い時は食害された葉を探しだすのが困難なほどである．

このことから秋期に羽化脱出した成虫はネズの葉の後食によって，越冬および来春の生殖のための成熟を計るものと思われる．

なお，飼育観察によると1974年９月29日に採集した２頭のうち１頭は６日目に，他は８日目に斃死し，1975年３月30日に採集した２頭は産卵後も１ケ月以上生存し，１頭は45日間生存，１頭は行方不明になったが８月３日に樹皮下で斃死しているのが見いだされた．これらは羽化間もないものは未成熟のため環境の変化に耐え得なかったものと思われ，一方越冬は樹皮下にて行うことが予想される．

## 交尾および趨光性

1976年５月11日に採集した５頭を飼育箱（透明プラスチック縦13 cm，横20 cm，高さ17 cm）に入れて室内に置いていたところ，夜間スタンドの光のある側に集り，箱を反対に向けるとまた明るい側に移動するのが見られ趨光性を示した．

翌日の午後７時45分，箱の蓋の中央部で１頭の♀の上に♂がかぶさっているのが見られた．♀は産卵管を尾端から出しており，♂は前肢で♀の前胸背と鞘翅との境を把握し，尾端

をしきりに産卵管の尖端に接近し交尾に入ろうと努めていたがなかなか成功せず，３～４分たったころ一度挿入に成功したかに見えたが１秒もせぬうちに離れてしまった．♀は僅かに移動，♂は前肢で♀の肩を持ち数回挿入を試み７時50分に成功した．８時15分までの25分間にわたり交尾状態は持続し，その間♀は時々少しずつ前進し，触角を絶えず上下に動かし，♂は前に出した触角をそれに接触させていた．♀が前進しかけると，♂は前・中肢で♀の中肢を，後肢で♀のそれを動かせまいとするようにかかい込む動作をして，♀の静止した時に♂は挿入した生殖器の出入を行い，終了すると尾端は結合したまま♂は♀の背から離れ，互は反対方向に頭を向け，次で交尾器が分離し，両方ともに少し静止したのち運動を開始した．以上のことから，外部からの妨害がなければかなり長い交尾時間をもつものと思われる．

## 産卵および孵化

1975年３月30日に採集した２頭の♀を径４cm，長さ13cmの管瓶にネズの小枝と一緒に入れ，キルク栓をして机上に放置していたところ，昼間は葉軸の方に頭を向けて葉上に止まっていることが多く，夜間になると活発に動き廻っていたが，４月８日の夜に管瓶とキルク栓の間隙に１個の卵が産卵されており，２頭の成虫は産卵管を出して小枝の適当な間隙を尖端で探しながら動き廻っているのが見られた．翌朝までに栓との間隙の他の場所２ケ所に各１個，栓自体の間隙に１個の卵が産卵されているのが認められた．当日ネズの生木の一部を採取して飼育箱に幹と若々しい小枝を入れて２頭の成虫を移したところ，樹皮の間隙に産卵加工をせずに１ケ所１卵あて短時間のうちに産卵を終了し，別の産卵場所を求めて移動するのが見られた．

管瓶から成虫を取出す時に得られた４個の卵（栓の周りの４個のうち２個は栓を取り外す時に破損したが，小枝の何処かに産卵されていた２個がころがり出た）を発泡スチロールの小箱に入れ，上から孵化時の支持のため紙を置き，毎日の変化を観察したところ４月13日（５日目）に１個は萎縮，４月16日（８日目）に孵化を開始し，先端から天牛の幼虫の形態をした頭部がのぞいて動いていたので，早速ネズの樹皮の間隙に入れてやったところ，翌日には完全に脱皮して少しずつ奥に入って行くのが見られた．同じ日に他の２卵も孵化を開始した．これらから卵期は８～９日間ということになる．

1976年４月４日採集の１頭の♀および同年５月11日採集した５頭中翌日交尾した１頭の♀を解剖したところ，それぞれ９個の卵を認めた．（抱卵数に関しては幼虫の食痕のところで後述．）

即ち，産卵は４月８日ごろから５月中旬ごろまでネズの樹皮間隙に，産卵加工をせずに，１ケ所１卵の形式で行われ，８～９日間の卵期後孵化した幼虫はそのまま穿入して行く．

## 卵の形態（第８図版，第３図）

両端に向って僅かに細くなり，両端は鈍円を呈し，淡黄色で，得られた４卵の計測は長径1.5～1.6 mm，中央径0.5～0.6 mmであった．体長比は0.176～0.200と大きく，体長比だけからいえば小島[11)]の報告によるAseminaeマルクビカミキリ亜科の0.077～0.083よりLamiinae クワカミキリ亜科の0.119〜0.236に近く，従って抱卵数も他の Aseminae のものに比べ非常に少いのも不思議ではなく，このことは本種が Aseminae の中で進化の進んだ種類であるということを物語っている．

## 蛹化および羽化

8月下旬ごろから一部の成熟幼虫は胸部の両側がやや透明となり，2日ほどして今まで扁平で巾広い胸部に腹部が細く続いていたのが，全体的に一様の太さを呈して前蛹状態に入り，3日目には蛹化し，尾部に脱皮した部分を付着し，しきりに尾部をふってそれを取り除くような恰好をしているうちに脱落し，蛹化が完了する．

蛹の期間および羽化の状態は資料不足のために確認し得なかったが，9月5日に1頭の成虫が羽化している．なお，観察のために蛹室を開放していたので脱出口は認め得なかったが *A. nadezhdae* Tsherepanov [2)]は樹皮表面に楕円形の孔を開けて脱出すると報告されているところから，本種も同様な脱出口を作るものと思われる．

また，飼育例で11月5日に幼虫の状態で斃死したものもあるので，蛹化および羽化はかなり遅くまで行われるものと思われる．

## 幼虫の食害状態（第8図版，第4図）

前述の産卵のために用いたネズは1975年4月9日岡山市高松町で採集したものである．それは2mほどの1本の生木で，約3等分し，上の部分の枝および先端を切り払い，更に3分して使用した．対照のため残りの下の部分はそのままとし，中の⅓はその場所の地面に放置しておいた．

観察に用いた材のそれぞれの大きさおよび食痕数は（合流して正確に数え得ない部分もあったが）大体次表のようである．

| | 下端径 | 長さ | 上端径 | 食痕数 |
|---|---|---|---|---|
| 下 | 2.7 × 2.4 cm | 18 cm | 2.1 × 2.0 cm | 14 |
| 中 | 1.8 × 1.5 | 20 | 1.5 × 1.2 | 11 |
| 上 | 1.5 × 1.2 | 20 | 0.8 × 0.7 | 10 |

食痕数の合計（この中には孵化直後間隙に放した2頭の幼虫の分も含まれる）に管瓶で得られた4卵を加えると2頭の♀による産卵数は39となり，1頭の抱卵数は少くとも20個くらいと推定される．

食痕を見ると樹皮下層と辺材部表層を加害しており，その形状は産卵個所から幼虫の成長に比例して巾を増大しつつ，蛇行または釣針状に方向を変え末端に蛹室が作られている．坑道は木屑または糞の混合物でかたく詰められ，それらは初めは樹皮と同じ茶褐色を呈し，ついで材部と同じ白色の木屑の量が増加してくるために霜降り状になる．

坑道の長さは大体 2.8〜4.4 cm で，蛹室は坑道と同様樹皮下と辺材部の間につくられ，蛹

室の入口は約4 mm，長さは 9～12 mm で，その形は楕円形または不正円形である．一部の坑道は詰物を取り除いた時，何個の坑道が一緒になったのか不明の場合もあった．また，ヤニにより坑道が塞がれ，その中で未熟幼虫が斃死しているところも認められ，このことは産卵が生木よりは伐採木または衰勢木に行われた方が有利であると想像される．

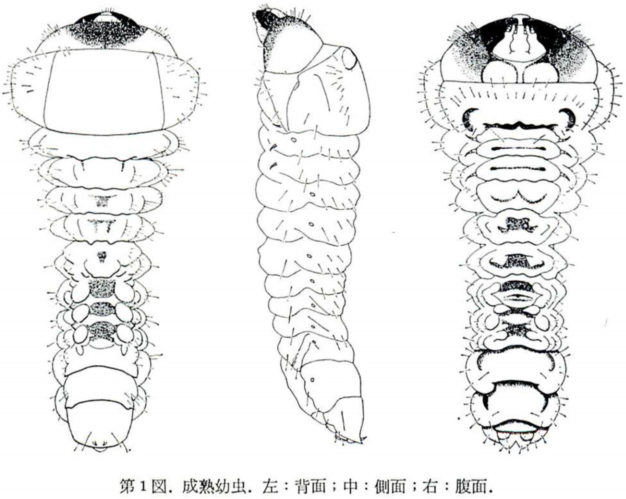
坑道の材面は平坦で浅く，ネズを加害した *Palaeocallidium rufipenne* (MOTSCHULSKY) ヒメスギカミキリの食痕と比較すると，後者は材部を深く荒々しく加害し，材の変形が著しく，蛹室が材部の中に作られることにより容易に区別される．

なお，対照のネズを同年8月3日に調査したところ，下⅓の生木部分は何等昆虫による加害は受けていなかったが，切りはなして放置しておいた中間の⅓は樹皮下に食痕を認めたので持ち帰り，飼育箱に入れておいたところ，翌春ヒメスギカミキリのみが13頭羽化脱出した．即ち，被検材は採取当時何等虫害は受けていなかったこと，および生木部分と伐採部分との昆虫による被害の差が確認された．

## 成熟幼虫の形態

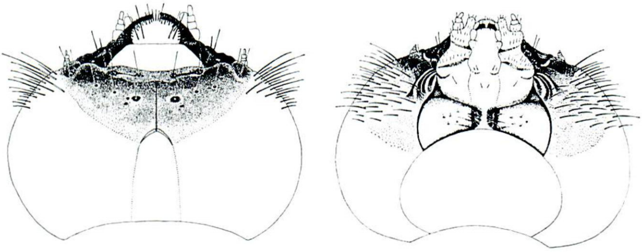
僅かに平たい円筒形，前胸の巾が最も広く，中胸から後方の第6腹節まで次策に細まり，第7・8腹節は前節よりやや太くなる．頭部の約½は前胸に嵌入し，頭部および前胸背板の一部以外は乳白色．体には細い毛が疎生する．

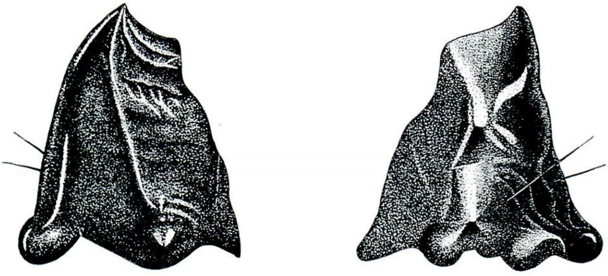
頭部は横巾が広く，側縁は後方に丸味をもって広がり，後縁はゆるく弧状に切れ込む．後頭孔は横に長い楕円形．正中線は中・後部が明瞭で黒褐色，前頭より一段高い．前頭縫合線はやや判然とする．前頭前縁に近く，それに平行して左右に浅い横溝があり，その各両端に1本ずつの刺毛を有する．また，正中線のほぼ中央部から触角を結ぶ線上に数本の刺毛を有する．頰剛毛は茶褐色で太く，密生する．咽喉は判然としない．Hypostoma は判然とし，茶褐色で短毛が数本あり．Epistoma は突出せず，1本の epistonal setaをそなえる．大腮は黒褐色で楔形，長さは巾よりやや長く，截縁は斜めで，咬合面において横に走る3本の隆起線

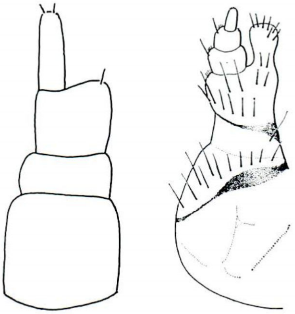


第1図．成熟幼虫．左：背面；中：側面；右：腹面．

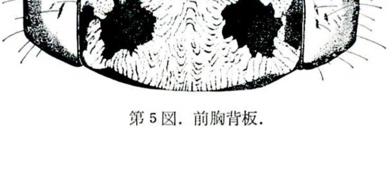
と，その下方に直角に走る低い数本の隆起線があり，外側において上下２つの隆起があり，２本の刺毛をもつ．頭楯は梯形，基部の巾は前頭前縁の約½．上唇は横にやや長い楕円形，基部を除いて剛毛を密にそなえる．小腮の各部はゆるく隆起し，小腮葉片の内側には１本の短毛があり，軸節との境は余り判然としない．蝶鉸節は三角形で，刺毛を有し，下方は黄褐色．小腮担鬚節は大きく表面は矩形．葉節は担鬚節に付着し，その境は不明瞭で，それぞれに長剛毛がある．下唇の亜腮は縦長の矩形を呈し，２本の矩毛がある．小腮葉片との境は前方のみに認められる．腮はほぼ楕円形，２対の長剛毛あり．下唇担鬚節は大きい．下面の口器は hypostoma の巾一杯に付着する．触角は小さく，４節からなる．


第2図．左：頭部背面；右：同腹面．

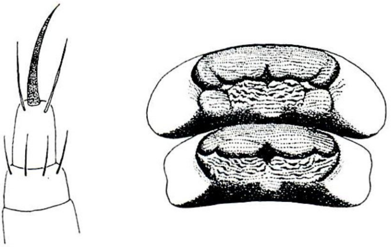

第3図．右大腮．左：咬合面；右：外面．


第4図．左：触角；右：小腮．

前胸の両側には長毛を疎生し，背板の側線は前部まで明瞭．側線に接し，やや後方左右に淡褐色微細顆粒状の地図紋あり．正中線は前部にのみ僅かに認められる．真腹板は前縁以外は境界が明瞭．脚は細長く，腿節と脛節内側に剛毛あり．中胸の気門は少しく弧状を呈する．中胸の下面と後胸の上下面に歩行隆起がある．


第5図．前胸背板．

腹部の歩行隆起は第１～７腹節にあり，第１・２節背面の表面は前と後の中間に深い横溝があり，前部では横に密に平行して走る浅い溝があり，後部では乱れた溝を呈する．気門は淡褐色，楕円形．後部３節の側板は突出し，第９腹節は大きく，正中線近くに１対の小さい caudal spine があり，茶色で内側に僅かに曲る．腔門は３裂．


第６図．左：脚；右：第１，２腹節背面歩行隆起．

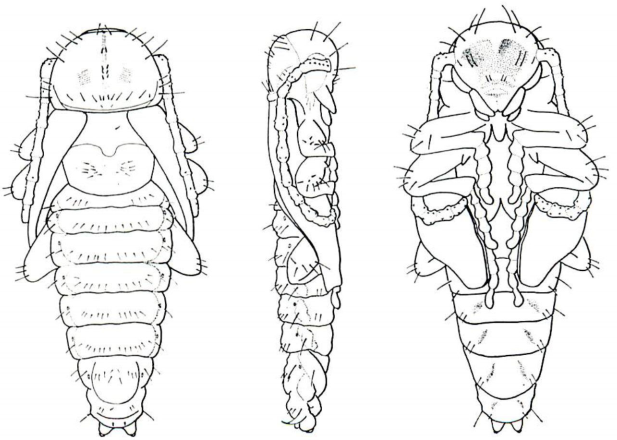
終令幼虫の頭部の巾1.9 mm，長さ1.5 mm，体長約５mm．

被検材料は卵から飼育し，1975年９月２日に液漬標本にしたものである．

## 蛹の形態

体は扁平で，頭部において鈍円を示す紡垂形で乳白色．頭部は前胸腹面に向って強く傾き，卵形で，背面から僅かに頭頂部の一部が見られ，前面は僅かに陥凹する．表面は平滑で，頭頂部に数本，両複眼間に６本の刺毛，上唇上部に数本の短毛を見る．上唇は小さく三角形．触角は体側に沿い下降し，中肢脛節端の内側から内転上行し，中肢脛節と上翅縁の交った点に達する．各節先端はぼう隆し，各節表面に不規則に小棘状突起が散在し，第１節のそれは尖端が黄褐色を呈する．前胸背は長さより巾がやや大きい楕円形，平滑で正中線およびその両側に横に平行して並ぶ浅い溝が見られ，正中線部の溝は頭頂部の一部に移行して見られる．正中線上に数本の短毛，前縁および後縁近くに数本の刺毛を有する．中後胸背は平滑で，中胸背に１本，後胸背に数本の刺毛あり．

上翅は先になるに従いやや狭ばまり，先端は截断される．肢は短く，脛節が正中線に対しほぼ直角に張り出し平滑．各腿節端には６～７本の刺毛あり．腹部背面の中央は平滑で１～８各節に刺毛を有する．腹面も中央は平滑，側部は顆粒状で各節に２～３本の刺毛あり．第９腹節端には caudal spine が１対正中線近く位置し，先端は茶色で内側に僅かに曲る．♀では


第７図．蛹．左：背面；中：側面；右：腹面．

1対の球状突起を有する．

体長 6.1 mm，前胸背巾 1.6 mm　最大体巾 2.9 mm.

被検材料は卵から飼育し，1975年８月28日に蛹化した液漬標本である．

## 要　　約

以上，本種は３月下旬陽気とともに外界に現れ，交尾後４月８日ごろから５月中旬にかけてネズの伐採木または衰勢木の樹皮間隙に１ケ所１粒ずつ未加工で産卵する．成虫は産卵後もネズの葉を後食し，岡山県では５月中旬，長野県では６月初旬ごろまで生存する．卵は約８～９日間の卵期ののち孵化し，そのまま樹皮下に穿入し，樹皮下層と辺材部表層を食害する．坑道は木屑および糞でかたく詰められ，８月ごろから坑道の末端で樹皮下層と辺材部表層の間にやや広目の蛹室を作り，その中で蛹化する．９月初旬ごろから羽化脱出し，翌春の繁殖に備えネズの葉を後食し，冬期はネズの樹皮間隙で越冬するものと思われる．

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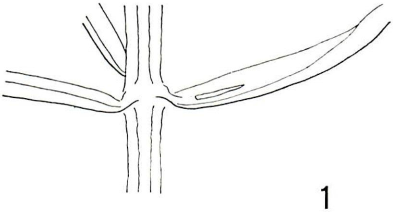

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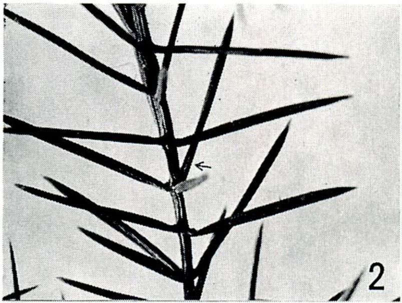

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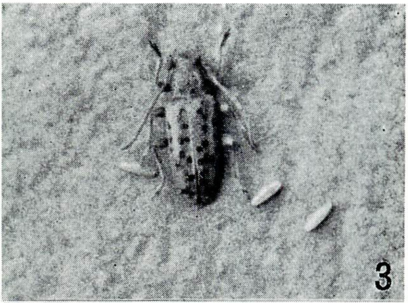

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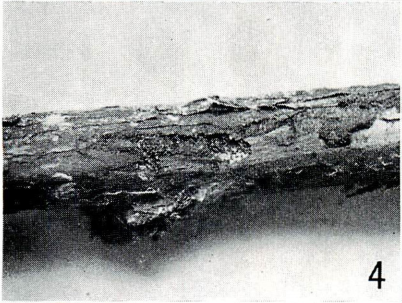

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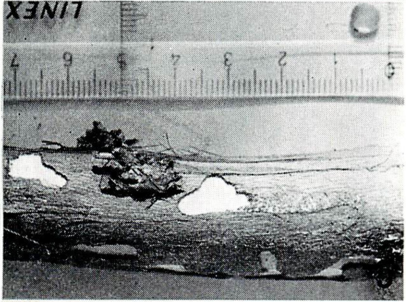

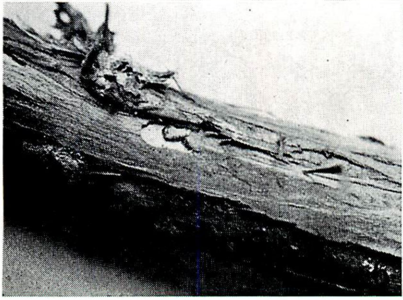

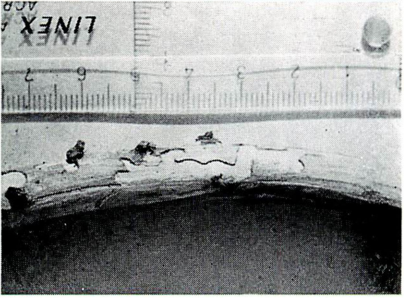

(Y. KURODA del. & photo.)

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## 第8図版説明

1 & 2. ネズの葉の後食部分.
3. 成虫および卵.
4. 食害されたネズ.
5. 坑道および蛹室.
6. 蛹室と成熟幼虫.
7. 合流した坑道.

## Résumé

*Atimia okayamensis* HAYASHI attacks *Juniperus rigida* SIEB. et ZUCC. The adults appear toward the end of March, and copulate. Then they lay their eggs under the bark scales of recently cut trees or inactive trees. The adults feed the leaves of the living trees. The incubation period for their eggs ranges eight to nine days. The larvae feed entirely between the wood and bark, packing fibrous and feces behind them. Late in summer they make pupal cells at the end of the gallery, and pupate in the cells. The adults gnaw through the bark to escape and emerge toward the beginning of September, and feed the leaves of this trees. Then they may overwinter and appear again early in the next spring.

## *Sericania miyakei* Nomura を四国で採集

平野泰利

ミヤケチャイロコガネはこれまで，九州の福岡県および熊本県下で記録されているにすぎないが，筆者は下記のように採集したので，四国新記録として記録しておく.

2♂♂，愛媛県面河渓，7. VI. 1975，平野泰利採集，夜間灯火に飛来．同定並びに何かとご指導いただいた三宅義一氏に厚くお礼申しあげます.

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### 第28回（昭和51年度）大会記録

第28回大会を昭和51年12月5日に午前10時から大阪市東住吉区長居公園内の大阪市立自然史博物館において開催した.

後藤幹事の開会の辞にはじまり，大倉幹事から会務会計報告が行われた後，林幹事から本会に会長制度を設ける提案があり満場一致で承認された．引続き，“昆虫のくらしと自然保護について”の座談会が開催され，林幹事が座長となり，午前は主として“昆虫のくらし”について，単為生殖，群生態，種の密度の問題等々につき出席会員から活発な意見の交換が行われた．午後は，まず水沼哲郎氏からカラースライドを交え“ボルネオの昆虫について”の話があって後，“自然保護について”の座談会が午前に続き開催された．いろいろの意見が述べられたが，自然保護とは自然に一切の人手を加えず自然のままの状態に置くべきか，例えば高山植物のコマクサの群落に他の植物が侵入してきた場合，侵入植物をそのままの状態にしておくか或いはその植物を除去してコマクサを守るべきかという時には，後者を選ぶといわれた馬場金太郎先生の意見が印象的であった.

当日の出席者（敬称略）はつぎのとおり．有本久之・馬場金太郎・中條道崇・後藤光男・畑　守国・畑山武一郎・八田耕吉・林　匡夫・平松広吉・市橋　甫・伊賀正汎・生谷義一・今坂正一・井上貞信・石田　裕・石崎正裕・出雲善浩・河上仁之・花見正昌・木元新作・北村順三・倉田道夫・栗栖篤夫・槇原　寛・正木　清・的場　績・松田　潔・松田　昜・三宅義一・水野弘造・水沼哲郎・中川俊夫・中山紘一・奈良　一・越智輝雄・小田覚造・大倉正文・奥田好秀・澤田高平・杉野広一・武田　滋・田村　保・八木正道・矢代直也.（大倉）